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Military Affairs

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Nationalities Problem in Military Discussed

PM0609154588 Moscow ARGUMENTY I FAKTY in Russian
No 35, 27 Aug-2 Sep 88 (signed to Press 25 Aug 88) pp 1-2

[Interview with military sociologist Candidate of Philosophical Sciences Colonel Yu. Deryugin conducted by correspondent Z. Filatov: "...But Problems Remain. On 'Regional Cliques' [zemlyachestvo], and the Russian Language in the Army"; date and place not given—first two paragraphs are ARGUMENTY I FAKTY introduction; last paragraph is editorial comment]

[Text] We have all grown accustomed to the fact that articles devoted to our army appear on the eve of various celebrations. But life in the troops with all its problems and difficulties, joys and sorrows does not come to a halt on holidays or nonworking days. So now, when young draftees and those recently demobilized are only just getting involved in army life and civilian life respectively, the number of readers' letters in our mailbag asking us to talk about today's army and its problems has increased.

Our correspondent Z. Filatov met with military sociologist Candidate of Philosophical Sciences Colonel Yu. Deryugin and asked him to answer readers' questions.

Filatov: Everyone is well aware that soldiers of practically all nationalities serve in the Soviet Army. What problems arise in this connection?

Deryugin: Our army is indeed multiethnic and, moreover, today an increase in the multiethnic nature of the Armed Forces can be seen. Eight years ago there were people of 5-7 nationalities serving in companies and batteries, whereas now the number of nationalities has risen to 9-18. In the early eighties the army numbered 20-30 nationalities, and today 25-37.

The Armed Forces reflect the demographic situation in the country like a model of society, and if it is marked by an increase in the population of the Central Asian and Transcaucasian regions, this also makes an impact on the structure of the army. So, whereas 28 percent of conscripts in 1980 were from these regions, 37 percent of them are in 1988.

That is why one of the most important problems that we never faced before is the profound analysis and consideration of the national psychology of the personnel. For instance, soldiers from the Central Asian and Transcaucasian regions are more inclined to join together than the representatives of the Slavic peoples. There are also substantial differences in temperament, specific habits, ideas, opinions, and so on. This is very important to take into consideration when making up crews, teams, and subunits.

Filatov: So, officers must have the requisite knowledge of psychology?

Deryugin: Quite right, today insistently requires that officers possess method skills enabling them to work effectively with representatives of all nationalities. You can't get by without psychology and sociology here. A center for studying public opinion among servicemen has already begun its work in the army, and a whole series of other measures aimed at improving officer cadres' sociological and psychological education are planned.

Filatov: In connection with the change in the ethnic structure of the Army and Navy, is the role of the Russian language increasing?

Deryugin: Indisputably. The Russian language is the language of interethnic relations in our country. There is no other sphere in which knowledge of Russian is so important as the Armed Forces. All military regulations, directions, and instructions are written in Russian, soldiers are trained in combat skills in Russian, and commands are issued and orders given in it. Unfortunately, it must be pointed out that year by year the number of draftees with a poor knowledge of Russian increases. Of course, we are trying to even out the situation, but this takes time, and we have only just enough time to train real soldiers and true fighters in the full sense of the word.

Filatov: What is the reason for this situation? Are schools to blame?

Deryugin: To some extent, yes. But there is also another reason. It is a problem of upbringing rather than education. In my opinion, schools, yes, and other organizations are working in an obviously inadequate fashion to mold in young people a firm and active interest in the Russian language. It is difficult to resolve the problem in question without that.

Filatov: But what about conflicts arising from ethnic problems. What can be said about this?

Deryugin: I often encounter certain "authoritative" opinions on the army, usually based on individual instances that people try to pass off as a trend. But the truth can only be established as a result of scientific study. Conflicts within a group can be between soldiers of different nationalities, but that doesn't mean that they are always based on some national hostility. More often they are based on real vital conflicts linked with daily life and psychological incompatibility, a definite emotional explosion.

If we are referring to the main reason, I am convinced that the reason for most conflicts today lies in the extremely low standard not just of interethnic relations but of relations in general. Particular attention is now being devoted to resolving the problem in question in the Army and Navy. But you yourselves understand that stagnant phenomena cannot be overcome right away: It takes time and tireless work.

Filatov: Readers' letters mention regional cliques within the army. Is that also a phenomenon?

Deryugin: Evidently it is a question of microgroups existing in the structure of troop collectives on a national basis. A normal and logical phenomenon in itself. You and I are glad to meet people from our native region in life. But the task consists in not permitting the national exclusivity and isolation of these microgroups and their negative aspects.

Filatov: A great deal has been said recently about nonregulation relations and "bullying."

Deryugin: I will start by saying that the main efforts have been concentrated on creating a united front to combat this phenomenon. In principle this task is being resolved successfully. This has resulted in a reduction in the number of cases of nonregulation relations in the crime structure. In the last 6 months alone the number has fallen by one-third.

But it is not so much a matter of statistics as of a change of consciousness. Today soldiers feel that we have begun to take the "old-hand syndrome" [starikovshchina] firmly in hand. Officers are increasingly convinced that this evil can be vanquished. This constitutes a definite change for the better. But the problem has still not been fully resolved. Of course, even an isolated case of jeering or mockery arouses and will arouse just indignation.

Filatov: What do you see as the roots of the problem?

Deryugin: There are many of them and they are quite deep-seated. The external causes are stagnant phenomena in society, which have given rise to various negative processes. Schools, vocational and technical colleges, and technical schools also have their own "bullying." The increase in consumerism and the feminization of men are related to this...

Other causes are concerned with internal army conditions. Violation of the regulation life style, inadequate vigor on the part of the sergeants in combating "bullying," elements of formalism in educative work, and so on.

Today military psychologists and sociologists are elaborating special rules for this purpose, but real preventive measures must begin prior to joining the army. Many draftees are inadequately trained for service in the army. Not only physically. Studies have revealed that most of them aim to submit unconditionally to negative traditions. That is why it is important to try to ensure that moral preparations for service are stepped up. Who must tackle this? Everyone—families, schools, the Komsomol, DOSAAF, and military commissariats. Only by common efforts can we conquer "bullying."

From the editorial office: Judging by the military sociologist's answers, positive changes are taking place in the struggle against negative phenomena in the army. Sociological studies are being carried out and a quest is under way for the most effective measures to eradicate nonregulation relations. However, we believe that suggestions that the army's ailments are society's ailments are unconstructive. Ailments must be cured, and the sooner the better. The army itself can do a great deal in educating people. We hope that readers will continue their discussion of the army, and we await letters and proposals from them.

Party Membership Should Not Be Requirement for Advancement

18010448b Moscow KRASNAYA ZVEZDA in Russian 26 Jun 88 Second Edition p 2

[Article by Guards Major P. Sinitsyn, Northern Group of Forces: "Job-Related Qualifications"]

[Text] It is no secret that nonmembership in the party on the part of an officer can be an obstacle to his promotion. It happens that a lieutenant who has served a year or two as a platoon leader submits a written request for acceptance as a candidate for membership in the CPSU, regardless of his moral or spiritual readiness for this. It also happens that the young officer is accepted, with the decision based not so much on his job-related qualifications as on the need to enhance his prospects for professional growth.

In my opinion, situations such as that above should be ruled out completely. In the resolution of all questions pertaining to assignments and promotions, there should be only one criterion - the kind of performance which the man can give and the level of his competence and professionalism. This should be put to the test in the strictest manner. This will stop some people from rushing to join the party with no purpose other than furthering their career interests. This is the only way we will guard the purity of our ranks. It is just because of the levelling of the elevated title of Communist of past years that we are now compelled to raise the question of social and political certification. I support this idea completely. It is high time that we ascertain the kind of contribution each Communist makes to the work of his party organization, to the matter of perestroyka. The certification should be accomplished carefully, all-inclusively, and definitively. In addition, to make it into a real educational tool, it is desirable to carry it out in open party meetings. Let everyone in the collective know who is who.

I believe that our ranks must be purged not only of those who have brought discredit upon the title of Communist, but also of unsuitable and passive people. I am sure that this will enhance the responsibility and authority of every CPSU member in the eyes of nonmembers.

13005

Pre-Conference Discussion: One-Man Command vs. Democracy

18010448a Moscow KRASNAYA ZVEZDA in Russian 21 Jun 88 Second Edition p 1

[Article by Guards Major A. Tsurkan: "No Loss in Authority"]

[Text] The Draft Guidelines approved by the CPSU Central Committee for the 19th All-Union Party Conference stress that the course set by the party to effect perestroyka and acceleration of the country's socio-economic development has been associated from the very beginning with democratization of Soviet society. Democratization and glasnost have yielded fruit.

Perestroyka is also knocking persistently on the door of Army life. In our regiment, for example, leaders give reports before the party organizations - a procedure which is becoming standard practice. The subunit party organization has already heard a report by Deputy Battalion Commander for Political Affairs V. Kuznetsov, while the regimental commander did the same in front of the command party organization. These reports are quite useful.

The vast majority of servicemen are in favor of democratization of the service. However, there are those who are greeting its initial flowering with fixed bayonets. As a matter of fact, I recently read about this in the KRASNAYA ZVEZDA. In a comment entitled "Are We Moving too Fast?," the writer stated that we are going too far when we require commanders to report before subordinates. The author insinuated that this "may harm the well-built, solid building." I do not know all the ins and outs, but I can say that our regimental commander's authority has not suffered as a result of the reporting. On the contrary, it became even stronger. People respect him for his openness, being unafraid to admit mistakes, listening to people's opinions, and bringing up troublesome questions at the party rostrum.

Yes, the commander exercises one-man command authority. But does democratization really undermine the principles of one-man command? In my opinion, the commander can function better and more easily when the collective also "takes on" many problems. Personnel problems, for example. Officers were previously promoted on the basis of the commander's consulting with his deputies (often without doing this), thus sealing the officers' fate. Everything was done in secret. Errors were often committed. Now that the party organization is also involved in personnel problems, the certification committee is operational in the regiment, with fewer mistakes made. The people being promoted are worthy, as a rule.

However, there are still more than enough problems. I believe that the process is far from democratic when it comes to electing party secretaries. I can recall a case when a Communist "made the grade" for party committee membership by unanimous vote; later, he was voted secretary - the senior commanders had their way. The man who was voted down by a good half of the Communists became head of the party collective. Is that fair? I strongly believe that the party committee secretary should be elected by all the Communists voting in secret ballot. That is my suggestion.

I believe that the above procedure for electing secretaries can be extended to gorkoms and obkoms. If it were, party organizations would not be headed by unsuitable people who become secretary not to fulfill a party mission or obligation, but to acquire power, a stepping-stone to nomenklatura privileges.

I suggest that the tenure of elective party and governmental offices be limited to two terms, with no exceptions. If exceptions are permitted, this could be utilized as a loophole by people who are morally unfit to occupy positions of leadership but use any means to "stay afloat."

There is something else. It seems to me that it is time to put an end to clear-cut violations of the CPSU Statutes, when communist leaders are not held accountable by their party organizations. In the case of infractions which bring discredit upon the prestige of party membership, the violator is examined not by the regimental party organization, but by superior party organs. The end result is that there is one system of party discipline for rank-and-file Communists, and another for communist leaders. This is hardly compatible with the principles for democratizing our society and with glasnost.

13005

Military-Strategic Parity as a Factor in Preventing War

18010260a Moscow KOMMUNIST VOORUZHENNYKH SIL in Russian No 12, Jun 88 pp 40-46

[Article by Col P. Skorodenko, doctor of historical sciences, professor: "Military-Strategic Parity as a Factor in Preventing War"]

[Text] Enormous are the achievements which mankind has reached in his ongoing development. On the eve of the 21st Century, new horizons of civilization are opening up for nations and peoples. However, all of this is under question. The danger of nuclear war hangs over mankind like the sword of Damocles.

An awareness of the realities of the nuclear missile age and the interests of the survival of mankind dictate the necessity of new political thinking. This proceeds from the complete inadmissibility of war as a means of policy, the futility of the desire for military superiority and the absurdity of the arms race. Life has posed on the agenda of today the need for a fundamental restructuring of

international relations in accord with the new political thinking. This permeates the document concerning Warsaw Pact military doctrine. This doctrine is subordinate completely to carrying out the most important political task of today: preventing war—both nuclear and conventional.

* * *

The policy of peace and international collaboration, the course of checking the arms race, disarmament and eliminating the threat of a nuclear missile disaster, in being carried out by the Soviet Union and its allies, are most important areas in the activity of the CPSU, the fraternal communist and worker parties in light of the new political thinking. Socialism opposes the militaristic policy of the United States and NATO with a clear, precise and maximally realistic program for the survival of mankind in the nuclear space age. This program has a completely reliable material base, a mighty military-economic potential of real socialism ensuring military strategic parity between East and West.

Incidentally, the new political thinking itself, as a practical method of acting on the world scene, has become possible and was turned into a reality only after the achieving of military strategic parity. It has become feasible only when our defense industry, our army and the entire nation by unprecedented sacrifices has concentrated all their potential in this area, it has withstood the race and the competition and has achieved military strategic equilibrium.

The core of this parity is the balance of military strategic forces between the USSR and the United States, the Warsaw Pact and the North Atlantic bloc. The establishing of military strategic parity between the USSR and United States, the Warsaw Pact and NATO has strengthened the positions of the USSR, the socialist countries and all the progressive forces, and has overturned the plans of the aggressive circles of imperialism for victory in a world nuclear war. The maintaining of the existing equilibrium is a serious factor in ensuring peace and international security. The document "On the Military Doctrine of the Warsaw Pact States" points out that the presently existing military strategic parity remains the decisive factor in preventing a war.

The military strategic parity between the USSR and the United States, the Warsaw Pact and NATO means approximate equality of the sides in strategic nuclear weapons, antimissile systems and in other types of nuclear and conventional weapons, excluding the military-technical superiority of one side over the other.

The strategic nuclear missile parity between the USSR and the United States holds a key place in the over-all military strategic equilibrium between NATO and the Warsaw Pact. Among its key criteria are: the number of nuclear carriers: intercontinental ballistic missiles, submarine-launched ballistic missiles and heavy strategic bombers as well as the number of nuclear warheads and their total power. In the specific instances consideration is also given to the combat performance of the nuclear missile weapons: the flight time, the degree of their combat readiness, the reliability of the launch and delivery to target, the probable circular error and so forth. Among the objective criteria for strategic nuclear parity one must also put the possibility of the antimissile systems, as the predominance of one side in this area can lead to an imbalance in the capabilities of the nuclear strategic offensive weapons.

Parity does not mean a complete identity or a precise equality of all types and classes of weapons, since there are differences in the development of Soviet and American nuclear potentials, in their geostrategic position, but it does assume that considering these factors the qualitative and structural differences as a total are approximately evened out.

As for the ratio of conventional weapons of the Warsaw Pact and NATO, here one can reliably speak about the presence of an approximate over-all equality. Thus, in Europe, NATO and the Warsaw Pact have approximately equal over-all numbers of personnel and the amount of artillery. The Warsaw Pact surpasses NATO in tanks. NATO has an advantage in the number of battle-ready formations and for fighter bombers. As a whole for conventional weapons there is an approximate equality, an approximate parity. This repudiates the notion spread in the West of the "predominant superiority of the Warsaw Pact countries in conventional weapons."

In recognizing the truth that the nature of modern weapons leaves no hope of protecting oneself merely by military-technical means and that the ensuring of security more and more comes up as a political task and it can only be resolved by political means, the Soviet Union and the other socialist states at the same time consider that until an effective international political mechanism has been established and the international legal means of blocking a nuclear war are still lacking, the Warsaw Pact countries in the aims of ensuring their security are forced to rely on their own defense potential as compared with the military potential of NATO.

The struggle of the Soviet Union to eliminate the American nuclear monopoly and then for military strategic parity was an important condition for carrying out Lenin's ideas on the defense of socialism and for establishing the principle of peaceful coexistence under new historical conditions. Under the short period of time when the United States possessed a monopoly of nuclear weapons, it decided against the unleashing of a war since it did not have the necessary number of nuclear warheads and delivery systems for the guaranteed destruction of the Soviet Union. With the elimination of this monopoly and particularly after the development of the intercontinental ballistic missile in the USSR, the American strategists had to take into account the inevitability

of a retaliatory strike. Precisely the nuclear missile defense potential of the Soviet Union was the main obstacle on the path to the unleashing of a war by imperialism against the socialist countries.

In the first half of the 1970s, the military and political leadership of the United States recognized the established approximate equality in military strategic nuclear forces in the USSR and the United States. This conclusion was reinforced in a number of official Soviet-American documents, including the SALT-I Treaty, in the preparation and signing of the SALT-II Treaty as well as in the course of further Soviet-American talks.

The presence of equilibrium restrains the imperial ambitions of Washington, and limits its opportunities to achieve social revenge and world domination. For precisely this reason the U.S. militaristic circles have stubbornly endeavored to shatter the existing parity and achieve military supremacy over the USSR and its allies. In words they recognize that under present-day conditions it is impossible to unleash a thermonuclear war, as this would mean the end of world civilization. But in fact, the spiral of the arms race turns ever-faster, particularly for nuclear arms, and this brings the world to the brink of disaster; militarism, as before, continues to remain the determining factor in the domestic and foreign policy of the imperialist states and the basis of the political and ideological thinking of their leaders.

One is struck by the fact that the ruling circles of the Western countries endeavor to relieve themselves of the responsibility for creating the threat of thermonuclear disaster, to shift it to the socialist world or to introduce into the minds of people the notorious notion of "equal responsibility" of the two great powers. At the same time, this means that the ruling elite in the West, in essence, lifts from itself any duty of waging as real struggle to eliminate the danger of a nuclear missile disaster.

At present, it is perfectly clear that under the conditions of the enormous stockpiling of nuclear weapons, when each of the sides could destroy the other many times over, the United States cannot win out over the USSR. The aggressive plans of imperialism are not only adventuristic but also illusory. The Soviet Union has repeatedly warned that it will not allow the disruption of the existing equilibrium and will take the necessary measures.

The state of the military potentials and the military-technical capabilities of the sides are such that the United States cannot achieve military superiority either in the stage of preparing for nuclear war or at the moment they try to commence a war. The Soviet Union has repeatedly drawn the attention of the American side to the fact that its ambitious plans to dominate the world, primarily in military terms, are hopeless. As long as the danger of war remains, as long as social revenge remains the core of the Western strategy and militaristic programs, we will continue to do everything necessary to maintain defense might on a level excluding military superiority of imperialism over socialism.

The maintaining of strategic parity is an indispensable condition for preventing a world-wide thermonuclear war and for developing a dialogue on arms limitation. This objective causality operates as an unique law for preserving peace on the basis of which the levels of nuclear opposition can be gradually and proportionately reduced.

In and of itself military strategic equality is not sufficient to ensure universal security. Certainly if the parity in the course of the unceasing arms race will be maintained at ever-higher levels, this will merely lead to an ongoing rise in both political tension and economic outlays as well as a greater threat of thermonuclear catastrophe hanging over the world.

The CPSU has pointed out that the present level of the balance of nuclear potentials between the opposing sides is excessively high. For now it provides each of them an **equal danger**. But only for now. The continuation of the nuclear arms race inevitable will increase this equal danger and can bring it to such levels where even parity ceases to be a factor of military and political restraint. Consequently, it is essential first of all to greatly reduce the level of military confrontation. True equal security in our age is guaranteed not by the maximum high level but rather by the maximum low level of the strategic balance from which nuclear and other types of weapons of mass destruction must be completely excluded.

In replying to a question of the newspaper *Washington Post* and the magazine *Newsweek* on the wisdom of maintaining minimum nuclear deterrent forces, M.S. Gorbachev commented: "If we will now be guided by 'minimum nuclear deterrents,' then I am certain that nuclear weapons will begin to spread through the entire world...."

However, the ruling circles of the imperialist states which are members of the NATO bloc remain supporters of the notorious doctrine of "nuclear deterrents" which is the yesterday of political thinking. The aggressive essence of "nuclear deterrents" is primarily that it, figuratively speaking, is "pregnant" with nuclear war and mankind can be confronted with the fact of these monstrous offspring which bring him death. This doctrine is a permanent generator of a further arms race and it also acts as a means of blackmail, threat, a policy of force and the basic source of mistrust in international relations. The doctrine of "nuclear deterrents" is extremely dangerous and amoral. Mountains of lethal weapons cannot be the guarantee of security, conversely, the more of them in the arsenals the less the security. The "balance of fear" has provided nothing with the exception of the unprecedented militarizing of foreign policy

and the economy and even spiritual life, it has caused harm in the sphere of international morality and mores and has poisoned the atmosphere of trust.

The question may arise: Is there a great difference in essence between the NATO imperialist strategy of "nuclear deterrents" and the most important provision in the military doctrine of the Warsaw Pact countries of maintaining military strategic parity as the crucial factor in preventing a war? Here the answer is unambiguous: it is a great difference.

In the first place, the NATO countries and primarily the United States in the aims of "nuclear deterrents" are constantly endeavoring to disrupt the military strategic parity in their favor and this has repeatedly led to a higher level in the military balance of the sides. The Soviet Union and the other Warsaw Pact countries are seeking to maintain the military strategic parity and bring about a stage-by-stage reduction in its level.

Secondly, while the NATO countries are constantly boosting the offensive military potential, the Warsaw Pact states are calling for a limitation on military potentials to a limit of sufficiency for defense.

Thirdly, the Warsaw Pact countries have assumed the obligation that they would never, under no circumstances, commence combat operations against any state or coalitions of them, if they themselves were not the object of armed attack, while the North Atlantic bloc countries rejected such obligations.

Fourthly, the Soviet Union even in 1982 at the XXXVII UN General Assembly Session stated that it would never be the first to employ nuclear weapons. This thesis has been also incorporated in the military doctrine of the Warsaw Pact countries. However, none of the NATO states which possesses these weapons has made such a declaration.

Fifthly, it is essential to bear in mind that the United States, as the politically and militarily leading NATO country is also being guided by its own national military doctrine of "direct confrontation" which envisages the possibility of waging war against the USSR and achieving victory in it.

Thus, it is a question not only of different approaches but also opposite ones to military deterrents and to the prevention of war.

In this context it is essential to emphasize that the fundamental feature of the military doctrine of the Warsaw Pact, like each of its members, is that it, being strictly defensive, is subordinate to the task of preventing war, both nuclear and conventional. While previously our doctrine set out views on the essence, nature and methods of waging a war which might be imposed on us by imperialism, at present the main goal has been defined as preventing its outbreak.

To the degree that under present-day conditions the military strategic parity is the decisive factor in preventing war, the Soviet Union and the other Warsaw Pact countries are doing everything necessary to prevent the imperialist states headed by the United States from shattering this.

The main area in the activities of the USSR and the other socialist commonwealth countries in the struggle to maintain military strategic parity with a constant reduction in its level is the political talks and the adopting of approved decisions in this area. However, in the United States and the other NATO countries there are influential forces, primarily those closely tied to the military industrial complexes, and who are overtly against reducing arms and for achieving military superiority over the Soviet Union and the Warsaw Pact. These reactionary forces in every possible way are preventing the achieving of mutually acceptable agreements in the area of disarmament and obstructing a reduction in the levels of military confrontation.

The Soviet Union has no desire to possess armed forces and weapons above what is necessary for defense. It is in favor of reducing the limits of sufficiency for military potentials by gradually reducing the armed forces and arms in such a manner that at each stage the military potentials of the sides balance out. It is completely obvious that the limits of reasonable sufficiency for the military potential of the USSR and the Warsaw Pact depend upon the positions and actions of the United States and NATO as a whole.

In recent years the USSR and the other socialist commonwealth countries have proposed a system of measures in the interests of ensuring security and eliminating the threat of nuclear war. The cardinal proposals in this area are contained in the Soviet program for eliminating nuclear weapons in the world by the year 2000. The realistic value of this program lies in the fact that it does not infringe on the security interests of any side and plans for a reduction in nuclear weapons in such a manner that an approximate equilibrium of forces is maintained from the first to the last stage.

The proposals of the Warsaw Pact countries for wide-scale cut-backs in armed forces and conventional weapons in Europe are a major addition and back-up for the program of completely eliminating nuclear and other types of weapons of mass destruction.

Due to the Soviet initiative a first step was taken toward a real reduction in nuclear weapons with the signing of the Treaty Between the United States and the USSR on Eliminating Medium and Shorter-Range Missiles. Regardless of the fact that in accord with the treaty the reduction is of an asymmetrical nature (the USSR is to reduce missiles and warheads by over 2-fold more), the balance of interests and the balance of security are fully maintained, since an additional real threat linked to the employment of American Pershings and cruise missiles

in Europe is lifted from the USSR and its Warsaw Pact allies. The Treaty to Eliminate Medium- and Shorter-Range Missiles provides a great chance to make headway along the road leading away from the looming disaster to a world without wars. It is a vivid example of how the new political thinking with its common human criteria and focus on reason and openness is making headway in world affairs, destroying the stereotypes of anti-Sovietism and suspicion toward our initiatives.

On the negotiating table are other of our constructive proposals including: for a 50 percent reduction in the strategic U.S. and Soviet offensive weapons with the simultaneous maintaining of the conditions of the Anti-Missile Treaty; for a complete ban on nuclear testing under strict international supervision, including on-site inspections; banning and eliminating chemical and other types of weapons of mass destruction. However, the desire and constant urging of the Soviet Union and the other Warsaw Pact countries to reach agreement on the limitation and reduction of weapons should be understood by no one as an indication of weakness. The socialist peace-loving policy is closely interrelated to a readiness and determination to jointly defend our revolutionary victories against the encroachments of imperialism. Abstract, toothless passivism is alien to it. "The socialist nations," pointed out M.S. Gorbachev, "allow no one to view them as lebensraum for alien appetites and revanchist longings."

For this reason another important way for maintaining military strategic equilibrium between the USSR and United States, the Warsaw Pact and NATO is the adopting of prompt and effective measures to restore parity in the event it is disrupted by the United States and its Western European allies. This was the case when the United States deployed its medium-range nuclear missiles in a number of the Western European states. This was also the case when the United States began to arm its strategic bombers as well as surface ships and submarines with long-range cruise missiles. This will be the case, if the United States begins to deploy weapons systems within the notorious Strategic Defense Initiative. Our retaliatory measures will be of a forced nature but they are essential so that in the potential aggressor a feeling of self-preservation prevails over the intention to unleash a suicidal nuclear war.

The socialist countries are aware that their successful realization of their mission of preventing war, preserving and strengthening worldwide peace depends largely upon their unity. The communist and worker parties the cooperation of which is the soul of the political collaboration of the fraternal countries are effectively working to strengthen the comradely collaboration of our peoples and the combat association of the armed forces.

The CPSU and the fraternal parties in the socialist commonwealth countries are doing everything necessary so that the defense of socialism be an insurmountable obstacle on the path of the aggressive intentions and military adventures of international imperialism. While favoring disarmament measures, the Warsaw Pact states are forced to maintain armed forces of such strength and on such a level which would make it possible for them to repulse an attack on any of the member states. In the event that an attack is made on them, they will deal a crushing rebuff to the aggressor. The prevention of war and readiness to deal a rebuff are two interrelated tasks.

The armed forces are a most important component element in the entire complex of factors determining the defense capability of each socialist country as well as their military coalition. These serve as the main and decisive means for the armed defense against imperialist aggression. For this reason the communist and worker parties and the governments of the Warsaw Pact countries show constant concern for the strengthening of the armed forces and for developing the combat cooperation of the allied armies.

In accord with the military doctrine of the Warsaw Pact countries, their national and joint armed forces act as the chief means of restraining imperialist aggression and preventing nuclear and conventional war. Their size and level of quality are strictly correlated to the level of the military threat, the nature and intensity of imperialism's military preparations and are determined by the demands necessary for ensuring the security of the Warsaw Pact countries and repelling aggression.

The defensive nature of the military doctrine of the socialist states places higher demands upon the level of training and combat readiness of the armed forces in the allied nations as well as on a strengthening of fraternity in arms.

As for the types of combat, in the event of an attack and in the course of repelling aggression, the armed forces will be forced to conduct not only defensive but also counteroffensive actions. It is impossible to carry out the task of a crushing rebuff of the aggressor and defeating it in conducting only defensive actions. The experience of World War II and the local wars eloquently shows this.

The combination of the defensive and the offensive for defeating the aggressor does not contradict the defensive focus of our military doctrine, as it is a question of offensive actions by the troops against an aggressor who has made an armed attack.

* * *

History has placed on socialism an exceptionally responsible and important mission: to prevent a new war, to bring about universal disarmament, to radically improve the international situation and to create favorable foreign policy conditions for socialist construction and world social progress.

The Soviet Union and the fraternal socialist countries proceed from the view that the basis for strengthening peace is the maintaining of the military strategic parity, its ongoing reduction and a lessening of military confrontation, and a steady reduction in arms and armed forces in ensuring equality and equal security of the sides. Not only the USSR and the other socialist countries are interested in resolving these problems but also to no less degree the peoples of the United States and the NATO countries and the peoples of the entire world.

At the same time, it is important to emphasize that the current development level of the Soviet economy, science and technology completely allows us to successfully carry out the most complicated tasks in the military-technical area and maintain the strategic parity.

At present, as a result of the peaceful offensive of the socialist countries, promising indications of an improvement in the international situation have appeared, but the threat of a nuclear missile war is still far from removed. This demands that the Soviet people and the men of the Armed Forces strengthen the economic and defense might of the nation and increase the vigilance and combat readinecss to protect the motherland and the entire socialist commonwealth.

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Pilot Error Major Cause Of Flight Incidents In GSFG

18010380a Moscow KRASNAYA ZVEZDA in Russian 5 May 88 Second Edition p 2

[Article by Col V. Yudin, first deputy chief, political department, GSFG air forces, military pilot-sniper: "Deformation" Soviet Forces in Germany] air forces, had come dangerously close to a flight incident. And twice at that, in two sorties. First with squadron commander Lieutenant Colonel A. Surovtsev, and then with Lieutenant Colonel Yu. Gorshov.

The acceleration in the first flight was so great that the airplane could have been subjected to residual deformation—that is, it could not be flown before the appropriate inspections were made. But the aircraft, which was not in fact airworthy, was allowed to take off once again, creating nothing short of ideal conditions for an emergency situation.

Being an instructor, Bondarik was the senior officer in the crew, and consequently he was primarily responsible for anything that might occur in the air. And yet it was the student pilot not the instructor on whom such responsiblity fell. In short, it may be stated that similar incidents of shifting responsiblility are not unique. It was not difficult to establish that the reason for such a prerequisite lies in the instructors' ignorance (however this, reproof pertains to pilot trainees) especially with regard to the stability and control of the craft in question and a suitable allotment of instructions to the student pilot. The leader ot the recorder group division, Captain O. Belukov, displayed high professionalism and conscientiousness by promptly discovering the violation of flight conditions and immediately reporting it to the duty engineer, Lieutenant Colonel A. Pospekhov. The captain dared to tell the truth, understanding that he was accusing the chief of a gross violation of flight rules. But Pospekhov lacked the courage to do the same. And not he alone. It was found out later on that many executives of even higher rank lacked the honesty and boldness.

The party investigation was conducted by Colonel V. Deshin, assistant secretary of the party organization. And although he should have been the first stick to his principles as a safety officer, and make the right conclusions from everything that happened, so that they could become a lesson to all, the party activist lacked the courage to challenge the opinion of the first deputy commander of GSFG air forces, Major General of Aviation V. Ivannikov, whose job it was to sort out the whole problem. His version went like this: Permissible acceleration was exceeded because of errors made by the student pilots, who pulled at the joystick so abruptly that the instructor was unable to react in time to correct the mistake. So that's how it was! The whole problem, it appears, was that the pilots jerked the life out of the joystick and the instructor suffered from poor reactions. In my opinion the problem lies elsewhere: Rather than upholding the truth, officials decided to defend the infamous honor of the uniform.

I would like to emphasize that the near-incident for which Bondarik was personally to blame was not entirely the fault: The officer in charge of flying, whose job it is to set the tone in the procedures followed when organizing the combat training of air units, had set the stage for the near-incident. He had to know that Surovtsev had not participated in advanced aerobatics for close to two years, but he raised no objections when a check flight involving one of the most difficult assignments was planned for Surovtsev—an assignment that was even beyond the instructor himself, as it turned out.

Almost a month following this near-incident a group of officers from the political department of the GSFG air forces carried out a routine inspection of the regiment. The airplane was still in the technical maintenance unit, barred from flying, though Pospekhov tried to assert that nothing at all was wrong with it. In a word, he was still bent on concealing the fact that the airplane had been put out of commission. And when he was presented with an explanatory note from Major A. Bessonov, chief of the technical maintenance unit, which stated that wing deformation exceeded the permissible norm by almost a centimeter, he began justifying himself by begging ignorance of the details of the situation that evolved in the air.

Bondarik behaved in about the same way when everything that had been uncovered in the regiment was made known to him. "You mean you couldn't have talked to me about this privately?" he asked with wounded pride. "Did you have to make it so public?" And at the end of the conversation he blurted out: "I used to get along well with political workers, but now that's going to change."

To me these words spoken in anger are actually a form of praise: Before, the officer never took political workers seriously, feeling that combat training and work with flight recorder data were out of their area of competency. Incidentally, the inspection mentioned above revealed that a number of officers responsible for combat training in the group's air forces were deficient in their handling of flight support issues. We naturally examined all of these problems from the standpoint of the people's attitude toward their duty through the prism of communist morality and responsibility.

It became clear after the inspection that the airplane was not the only thing that was deformed; a far more dangerous kind of deformation—of conscience, of honor, of professionalism and party principles—was graphically evident. Analysis of last year's near-incidents as well as of ones that have occurred thus far this year shows that the pilots are to blame in the absolute majority of the cases. That is, the causes are subjective in nature, meaning that the fight for flight safety must be carried into the domain of the human factor. Officers responsible for

combat training of the aviators must be the first to take on this task. And yet, last year an expensive piece of equipment was put out of commission at the fault of one of them, and people suffered. This year a pilot almost died.

What happened could be interpreted only as the natural outcome of the way things were going. The incident involved a gross violation of flight training procedures, such that a pilot who had experienced impermissibly long intervals between trainings in higher aerobatics was allowed to fly. And during this time the main combat training officer, regiment deputy commander Lieutenant Colonel V. Podkorytov, was actually relieved of his duties: On leaving the regiment temporarily, the commander left another deputy in charge. When Podkorytov decided to check the planning table the former would not let him do so, declaring that he had already reviewed it. It's none of your business, he intimated, now that you've been replaced. The reason he had been relieved of his duties was that the position that was still occupied by Podkorytov was unexpectedly given to a new arrival in violation of the relevant order of the USSR minister of defense and in avoidance of the personnel organ of the GSFG air forces. This new officer turned out to be Bondarik.

This situation could in no way promote normal conditions for combat training in the regiment. But when it came time for Major General of Aviation V. Ivannikov to sort out the incident, he attempted to lay the entire blame on Podkorytov, suggesting that he should be grounded. Only intervention by the group's air forces commander, who returned from leave and analyzed the situation in detail, saved the officer from reprisal.

The problems in the organization of flight safety efforts could not but trouble the group's aviators. Clear evidence that they are troubled can be found in the article "Risk Factors" by Colonel A. Shtepa published on 20 February of this year in KRASNAYA ZVEZDA. When it was discussed at a commander's conference Ivannikov displayed indifference to it at first. But when he recognized himself as the target of a passage discussing some inspectors from the higher staff who practice the "I can but you can't" rule, all hell broke loose. He began attacking the author from all directions. Unfortunately he was not alone, and a chorus joined him in demanding retirement of this hapless writer. It took considerable effort to defend this honest, principled officer against persecution for constructive criticism.

Or take another example. The pilots in the units continue to complain about the disproportionate quantity of paperwork they have to deal with to the detriment of combat training quality. There has been much unfavorable criticism of the so-called "pilot's log" introduced by Ivannikov. While in the beginning this document did possess a kernel of reason, today it has disappeared in a mass of statement and paragraphs, and the document is now in conflict with requirements of the air forces commander in chief concerning reduction of paperwork associated with preparation of pilots for flying. Colonel M. Balashov ventured this criticism. Later on he had a long talk with Ivannikov, after which he left his office absolutely depressed.

For the sake of justice I should note that officers like colonels M. Balashov, V. Myagkov, V. Kotov and Yu. Smorodin are deeply respected in the units for their high professional training, their adherence to party principles, and their readiness to help at any time, to share their rich experience. Nonetheless, "deformation" in the style of leadership in flight safety matters became obvious, and so a decision was made to bring this issue up at an expanded meeting of the party committee, and to invite the secretaries of the primary party organizations, the chiefs of services and all members of the military council. Communist V. Ivannikov was instructed to make a report. The topic was worded rather clearly: "Concerning Serious Shortcomings in the Work of Communists to Support Flight Safety." The day before the party committee meeting the speaker was once again given all of the details concerning what happened with Bondarik, and what was revealed by just one inspection carried out by officers of the political department.

On the following day Comrade Ivannikov made his report, in which he criticized just about everyone and everything, except those specifically responsible. The impression was created that the report had been written long ago, on another topic. For practical purposes he deflected the discussion at the party committee meeting away from the problem to which the meeting was devoted. This made it necessary to retell the whole story and to remind him of the meeting's agenda, but Communist Ivannikov could only ask in dismay: "Was flight safety the thing we were supposed to talk about?"

Colonel Bondarik has left for the Leningrad Military District on rotation. But people in the units remember the old "procedure", they know that executives of the group's air forces responsible for combat training are "infallible" in all matters. Even if they commit obvious violations of flight rules, others of lower rank and position are to blame, just like in the case described above.

In a word, the deformation must be corrected—and it must be corrected in the spirit of the restructuring effort.

11004

Yazov To Oversee 'Autumn-88' Exercises

LD0409105888 Moscow TASS International Service in Russian 1019 GMT 4 Sep 88

[Text] Moscow, 4 Sep (TASS)—It is planned to conduct command-staff exercises with designated troops (forces) under the agreed name of "Autumn-88" in the second half of September 1988 on the territory of the Ukrainian and the Moldavian SSR and the Black Sea waters adjacent to it, under the leadership of Army General Dmitriy Yazov, USSR defense minister.

The exercises are being conducted with the aim of working out questions of combat coordination and the mutual interaction of staff.

Lushev Heads Commission on Housing Problem

18010461 Moscow PRAVDA in Russian 24 Jul 88 p 6

[Article attributed to "'PRAVDA' Military Department" entitled: "We Serve the Soviet Union: A Place of Their Own".

[Text] PRAVDA has written repeatedly about the very unsatisfactory provisioning of housing both to active duty servicemen and to those being transfered to the reserve or entering retirement. The mail shows that not a single one of the obligatory decrees issued on this matter has been completely fulfilled. As usual instead of the regulation three months, the family of a retiree may wander for years without a place of their own.

The Main Billeting and Maintenance Directorate of the USSR Ministry of Defense reported to us: the most unfavorable situation in the provisioning of housing to reservists and retirees exists in the cities of Latviya, Moldaviya, in a series of oblasts in Belorussiya, in the Vinnitsa, Zhitomir, Nikolayevsk, Odessa, Poltava, Kiev and Crimean Oblasts of the Ukraine, in the Krasnodar, Primorskiy Krays, and in the Moscow, Leningrad, Kaliningrad, Kaluga, Novgorod, Ryazan, Saratov and Tula Oblasts.

It is understandable that the wait for housing turns out to be so long. It is complicated by residency permits, resettlement [in a civilian occupation], medical assistance, the education of children in schools and so forth and so on. And again. The frequent "thoughtlessness" of the move to a chosen place of residence is understood. Many families simple remain where they served, that is in closed cities, even if it is a "god-forsaken place", but with a roof over their heads. For example, in the past year movement from such cities located in the territory of Belorussiya and the Ukraine was possible only for 8.2% and 14% respectively, of the individuals subject to resettlement, but the local authorities of Bashkiriya, the Mordovian, Chechen-Ingush, Kurgan, Magadan and Chita oblasts did not give up so much as a meter [of space] for this purpose. Where in fact are the new arrivals to settle?

"Instead of taking active measures toward the unconditional fulfillment of the demands of the law,—Lieutenant-General N. Likhanin writes—several executive committees of local Soviets of Peoples' Deputies, under various pretexts are trying to limit the arrival for permanent residence in their populated areas of former servicemen. Recently attempts have been made to limit without cause residency permits in Minsk, Riga and Tallin. Unjustifiable limitations on their residency permits have been established in Moscow..."

Certainly, it would be naive to propose that the Army and Navy have exhausted all of the "internal", so to speak, reserves to resolve the housing problem. There are well-known facts of abuses in this matter, shortcomings in maintenance, repair, use of the housing fund, violations of the principles of social justice in the distribution of housing, irresponsibility of authorities responsible for this distribution, but, it appears to us, not responsible, for the fact that the housing question is not a standard of living question, but indeed a political one.

In the USSR Ministry of Defense and the Main Political Directorate of the Soviet Army and Navy they are deeply concerned with the situation which has been created. A central commission of the USSR Ministry of Defense lead by 1st Deputy Minister of Defense, General of the Army P. Lushev. It has been given the task of developing and establishing practical measures to resolve the housing problem in the Army and Navy. Similar commissions have been created in all of the arms and services of the Armed Forces, and in the [military] districts and fleets.

In the Ministry they believe that the local Soviets should be fully able to register servicemen entering the reserves without the presentation to them of documents on the departure from the previous place of residence, and the surrenduring of the residence occupied. The proposal is reasonable: many families would be relieved of unnecessary hardship until the receipt of a permanent dwelling place. The second, no less sensible proposal is to give to those departing into the reserves the right to priority entry to the ZhSK [housing construction cooperative/combine], to the receipt of a plot of land for individual construction, including to those who have three years remaining up to [their having] reached the determined period of service (independent of the place of service). Also the question of refusal of financial aid to servicemen in the elimination of indebtedness connected with the acquisition of cooperative housing is being resolved.

In other words, measures to provide housing to the defenders of the Homeland are being taken. And, this must be done so that they do not remain on paper.

UD/335

Regimental Economics: Inflexibility of Current Finance System

18010450a Moscow KRASNAYA ZVEZDA in Russian 24 Jun 88 Second Edition p 2

[Article by Col V.Durov, commander of an anti-aircraft rocket unit: "Independence on a Lay-Away Plan" Under the "Problems of Regimental Economics" heading]

[Text] Lately, there have been several articles in KRASNAYA ZVEZDA calling for more independence for military officers. For instance, in the April 21, 1988, issue, the article "Have Money, But Nothing to Pay with" proposed expanding the authority of unit commanders to allocate their budgeted funds. I think that this is an important and timely issue. It is no secret that financial questions in a large measure determine other questions as well, such as combat readiness. A commander, however, often finds his hands tied in situations where he could skillfully, flexibly and very efficiently spend the funds budgeted for his unit. Let me cite some examples.

To improve combat readiness of our anti-aircraft rocket unit we decided this year to build a parking space for motor vehicles and make improvements in the positions of two batteries. Legitimately enough, we contracted two civilian crews. The work began. Then came the agreed upon date to pay the workers. Besides the wages, the rest of our allotted funds had been spent on building materials and their transportation and on other urgent needs. We found ourselves in the following situation: construction was not finished, yet I, a unit commander, could not renew my labor contract with the crews. I had to wait until the beginning of the next month. The stumbling block was the fact that the funds budgeted for the unit's construction needs are not disbursed to us all at once but as though on a lay-away plan, in installments with strict monthly ceilings.

As a result, the following often occurs: a unit is sent to the practice range for a period of time (when it has no time to build), but still gets its construction funds in the same monthly installments. On the other hand, it may be time to build, just like in the above-mentioned example, but the commander, having reached his limit, must stop. In my particular case, I had a long diplomatic talk with my contractors as a result of which they agreed to continue the work and to postpone the pay period. And what would have happened if they did not agree? Could I have found another crew? With our modest budgets, it would not have been very easy. As a result, commanders must find a way out using their ingenuity. Sometimes, however, this ingenuity is applied in the wrong direction. They take their subordinates off practice duties and assign them to unfinished construction sites, make shady deals with managers of civilian enterprises and organizations swapping soldiers' labor for a crane or a bulldozer for a few days and take other illegal steps. This goes on until they are caught. Then, they have to answer for it. The question is why do we push commanders to such extremes?

It is clear that the existing financing system is often ineffective. For instance, winter beyond the Polar Circle or summer in the Karakum desert is not the best time for construction. Yet, funds disbursement regulations is identical everywhere. There are also other arguments against this system. In general, it is not flexible enough, does not take into account special conditions at various units or changing circumstances and does not allow the commander to use his budgeted funds fully and most efficiently.

It is unclear, however, what keeps the system from being changed or modified. Perhaps, it is the fear that the commander will use the funds wastefully? In other words, he can be trusted with monthly sums, but not with annual ones. I think there is nothing here to worry about. More than anyone else, the commander has a stake in not wasting the money but using it most efficiently and wisely for the benefit of his unit, primarily to enhance its combat readiness. He will be, and already is, personally responsible for it. In addition, there are the financial service of the unit, financial entities at a higher command level, inspectors and controllers who can correct him if need be. I am convinced that if the system worked this way there would be fewer misunderstandings.

Recently, the head of my unit's financial service told me that the head of a higher-level financial service warned him not to use civilian transportation services to haul cargoes long distance. It is forbidden. We are allowed to contract them only for jobs within city limits. This is paradoxical. On jobs where theoretically we could make do with our own, relatively small-capacity vehicles, we are permitted to use civilian ones; on jobs where we need to hire several civilian KamASes or Kolkhidas [Soviet large truck makes] to transport cargoes long distance, it is forbidden, even though this arrangement is the most convenient for us. Under the old system we did not have to send our own vehicles, of which we have very few, shuttling back and forth hundreds of kilometers, nor worry about exhausting the fuel quota and about shifting officers or ensigns from their tasks so that they could be assigned as commanding officers on each vehicle. We have factored all this in and came to the conclusion that contracting civilian transportation firms makes economic sense both to us and to the state. Yet, it is not allowed. Period. I think that whatever is profitable, efficient, convenient and beneficial to our task should be allowed. This principle would form a solid foundation for commanders to use their personal initiative and creative independence.

12892

Review: 'Regimental Commander' by Merimskiy

18010450b Moscow KRASNAYA ZVEZDA in Russian 21 Jun 88 Second Edition p 2

[Book Review of V.A.Merimskiy et al, "Regimental Commander" by Arm Gen I.Shavrov: "At the Head of a Regiment" under the "Book Notes" rubric]

[Text] Voenizdat has published a book entitled "Regimental Commander" [1] by a group of authors headed by

Colonel General V.A.Merimskiy. Drawing on advanced practical experience, the book discusses various aspects of organizational, political and military training, administrative and economic activities of the regimental commander in peace time.

I think that the book's authors were able to show the vast scope of the regimental commander's activities and the importance of his personal training, broad knowledge, moral qualities and ability to think analytically, anticipate events, work creatively, use personal initiative and combine rigorous demands on himself and his men with solicitude for the people.

The book offers practical advice how to achieve consistently high level of combat readiness in each individual unit and the regiment as a whole, and how to organize and conduct exercises to enhance combat readiness. An important place is assigned to leadership training of commanding officers and to the work of the regimental commander to maintain unit commanders' and staff officers' requisite professional standards, that are applicable in modern conditions, and to improve their methodological skills. In particular, the book advises on establishing headquarters and organizing and conducting exercises for its staff as well as tactical war games.

The regimental commander would also find many useful recommendations on how to achieve quality performance of duty by troops, bolster discipline and instill unity in the soldiers' collective.

Using the experience of outstanding unit and formation commanders, the book gives practical advice how to use, store and repare the regiment's standard issue weapons and technical equipment as well as how to manage the regiment's economy, oversee financial transactions and exercise economic management. I think that the authors should have devoted more attention to the military science activity in the regiment, which, as is well-known, plays an enormous part in arming officers with experience and helps broaden their military and historical horizons.

Footnote

1. "Regimental Commander", V.A.Merimskiy, A.F.Mishagin, Yu.D.Baskalov, et al.; V.A.Merimskiy, Editor; Moscow, Voenizdat, 1988; 320 pp, 75 kopeks

12892

Shortcomings of Scientific Work in Military

18010263 Moscow KRASNAYA ZVEZDA in Russian 21 Jun 88 p 2

[Article by Cap Lt I.Kozhevnikov, computer group commander: "No Reaction, But No Action Either" under the "Conversation on a Timely Subject" heading]

[Text] After over 10 years of service in the Navy, I will take the risk of trusting my own judgement and make an observation: in the core staff of submarine officers (since I serve on submarines, I will speak about submarine crews), the number of people who do scientific research can be counted on the fingers of one hand. I know many officers inclined to scientific research, but all—now it can be said with all certainty—have chosen to stay away from science. Why did it happen? The CPSU Central Committee's Theses compel us to search for the answer to this and other questions.

This may sound immodest, but I must confess I have always been interested in creative work. At the navy school, I was a member of the military scientific society of midshipmen, read a great amount of technical literature and never missed an opportunity to hear lectures by noted scientists. Computer technology interested me most. Yet, I wanted to start my officer's career on a boat, and was glad to be assigned to the North after graduation.

I have nothing to complain about in my early career as an officer. I worked on a very important project which allowed me to learn a great deal and understand more about naval electronic systems. My older comrades, commanders and superiors trained me not only as an operator: they helped me form an engineer's and a researcher's attitude to the technology I work with. As time passed, I got closer and closer to research work and to science. I remember well my first step in that direction. I happened to get very excited about an idea of a co-worker, Captain Lieutenant G.Yeremenko. At the time, he was trying to improve something. The proposal promised to have a considerable economic impact, but it so happened that it fell to me to try to push the idea through. I put my own ideas into the project and made some additions. Yet, all that turned out to be in vain. A representative of a research institute, a man I respected, told me:

"Just think how the institute would feel if it were corrected by a worker in the field, even a scientifically literate one. Our authority would suffer. Moreover, to apply in practice an idea of a navy officer, we would have to write a ton of reports, get numerous approvals and coordinate things with everyone. It would be easier to design an entire new system than to surmount this mountain of paper."

I understand that tinkering with a complex electronic devise and making radical modifications in it is a difficult task. Moreover, I understand that something that from my modest point of view appears to be a gift to domestic electronics, may appear from a more scientific point of view impractical, economically ineffective or not promising. Yet, when after much effort you achieve something, you at least have the right to expect a professional evaluation. This evaluation gives you strength to carry on your research and convinces you that you are indeed working for science.

Risking to repeat myself, I would like to emphasize that it is important for me to know that my efforts in fact represent scientific research and that they are useful. If what I do has nothing to do with science, it is all the more

important for me to know it. Yet, this kind of evaluation is impossible to get locally. (Of course, I judge only from my own experience).

Ideas for my scientific articles were suggested to me by lengthy tours of duty. The data was collected and processed and the ideas were tested and tried in real-life conditions during those long travels, too, which are in themselves a great testing ground for trying out and reworking various ideas. One suggestion, born of practical experience, permits to shorten the time required to prepare electronic equipment for use. All my calculations, conclusions and suggestions fit on three typewritten pages. My work got good reviews from specialists and the formation commander gave me an award. I am particularly glad that my ideas were not forgotten but have been implemented and produce considerable results. All this is wonderful, one would think; yet, the path to this happy outcome was arduous.

First, I submitted my work to the chief specialist of the formation. He coolly put it away into his drawer and suggested that I hurry up with my report on the just-completed tour of duty. His logic was clear: my report was something the chief specialist was required to submit, and my scientific research project was not. I had foreseen this and sent a copy of my proposal to the representative of the naval radio-technical administration Captain 2nd Rank V.Vesenin. Only thanks to him my three typewritten pages were called back to life. How can we even speak of local evaluation? Is there any system that would give a green light to a promising scientific proposal by a practical specialist in the Navy? More often than not, such a proposal would die soon after being conceived on the desk of some local official. Research work can often be properly evaluated only at a research institute; yet, very few projects actually make it to research institutes. And even those that do, encounter resistance.

With my wealth of practical observations and ideas on many important practical issues, I decided to write it all down and to seek support from a representative of a research institute. After 2 years of hard work, I finally sent my paper to several organizations in 1986. It received positive reviews. In a personal conversation, one reader even told me that those were three solid chapters of a Master's thesis. I should have, it would seem, continue my work. Unfortunately, no continuation was possible. Everything died down all by itself. At first, I tried to do something about it. I knocked at the doors of many chief specialists, trying to convince them that it was important to develop the idea further, and offered to collect and analyze data not only from my own submarine but from other boats as well. I was denied permission, and then my normal duties took over and we soon had to go off to sea.

Strictly speaking, my work is not pure science. Rather, it is a set of generalized conclusions drawn from observing how the equipment functions, together with some suggestions. I need to draw broader conclusions and to conduct more in-depth studies.

What is it that scares officers away from military scientific research and keeps those who work on boats from fully realizing their creative potential? The first and the most important problem is the lack of interest in scientific research on the part of commanding officers—with very rare exceptions. Let me cite one example. Some time ago I developed a method that would, under certain difficult conditions of combat systems operation, allow the operator to make the right decision. I passed on my report to the chief specialist. Many days later I ran into that officer. He was troubled by something. I listened to his complaints and was surprised to find out that everything he was worrying about had already been systematically solved by my proposal. I asked him whether he read the papers that I had given him. It turned out that he did not.

The other problem is the following: over the years I have become convinced that research institutes are often happy to use us, local amateurs, to collect data they need. Only very few of the scientists and design engineers that I have met attentively and respectfully follow "boat" science. There is no system that would permit equal and interested contact between research institutes and boat specialists. As far as I know, there is no legal basis for it whatsoever; everything is based on the uncertain foundation of personal contacts and sympathies. And yet we, who work with practical applications, have a very strong need for constant interaction with scientists. It would help us focus on key problems, allow us to consult with authoritative specialists and help us learn the techniques of scientific research.

The third problem is the local attitude to military scientific work. The work of rationalizers and inventors is at least included in plans and some control is exercised over it, so that managers have to answer for it; projects at a higher level, on the other hand, for some reason are viewed as unnecessary or even unneeded.

Finally, I would like to mention that submarine crews have many talented engineers and designers. Today their are nothing but basic practitioners, ordinary grunts, from the core staff. Will all those who could get their Master's Degrees actually get them? (I do not even mention Ph.D.'s.) The answer does not depend only on them.

12892

Benefits for Military Personnel Fulfilling Their International Duty

18010456 Moscow SOTSIALISTICHESKAYA ZAKONNOST in Russian No 5 (643) 1988 pp 43-44

[Article by Maj Gen N. Bay, deputy chief, Central Finance Directorate, USSR Ministry of Defense: "Benefits For Military Personnel Fulfilling Their International Duty"]

[Text]The service of military personnel fulfilling their international duty is associated with serious difficulties

and increased danger to life. Therefore, the law provides them and their families a number of benefits and advantages.

Right to annual regular leave of 45 days (not counting travel time to and from the place of leave) is granted to officers, warrant officers and extended service personnel. These military personnel enjoy the right to this benefit during the period they are fulfilling their international duty. As concerns regular leaves for military personnel who have fulfilled their international duty, granted during the period of their subsequent service in the military districts and groups of forces, their duration under these conditions is determined without consideration of this benefit; i.e., in the generally established way.

After discharge from active military service, military personnel who have fulfilled their international duty are granted the right to use annual regular leave at a time convenient to them, as well as the right to additional unpaid leave of up to two weeks per year.

Housing benefits. Military personnel who have fulfilled their international duty, both those who are continuing their service in the military districts and groups of forces, and those discharged from active military duty into the reserves or retired, are granted the right to priority housing.

Military personnel who have been given the status of group 1 invalids in connection with the fulfillment of their international duty are granted the right to housing out of turn.

After discharge from active military service, military personnel who have fulfilled their international duty also have the right to receive a no-interest loan in the established amount for individual housing construction.

Education Benefits. Military personnel who have distinguished themselves in military actions, after returning to the territory of their country, have the right to be enrolled on a non-competitive basis for study in military educational institutions. With respect to military personnel who have fulfilled their international duty, after they are discharged from active military service the law grants them the right to be admitted on a non-competitive basis to higher and secondary specialized educational institutions.

Transportation Benefits. Military personnel who have been wounded, shell shocked or mutilated during fulfillment of their international duty (in cases when the individual was not given a disability status associated with the fulfillment of his international duty) are given a 50 percent reduction in the cost of transport by rail once annually (round trip), and in areas lacking rail lines, by water, air or inter-city automobile transport. This benefit is retained for the military personnel during the period they are in the reserves and retired.

Pension Benefits. Military personnel who have a recognized disability as a result of wounds, shell shock, mutilations or illnesses received while fulfilling their international duty, are provided increased pension support norms. Disability pensions are granted to them in amounts provided by law for invalids of the Great Patriotic War.

An important benefit for soldier-internationalists is the fact that their time of service associated with fulfillment of international duty and participation in combat operations is counted for pension purposes granted to military personnel under favorable terms—based on a calculation of three months for pension purposes for one month of service. This favorable procedure for counting years of service for pension purposes should not be confused with that established by law for counting years of work for old age pensions, which are granted by the social security organs. Active military service, including that associated with fulfillment of international duty, is calculated on a calendar basis—one day for one day—in the total years worked for this pension.

One time benefits in established amounts are paid to military personnel who received wounds, trauma or mutilation associated with official duties during the period of fulfillment of their international duty.

Military personnel given disability status associated with fulfillment of their international duty are granted benefits established by law for Great Patriotic War invalids, including: the right to obtain free medicine according to a doctor's prescription; free city passenger transport (except taxi) and common use automobile transport in rural areas within the boundaries of the administrative area of their place of residence, local rail and water transport, and transport on local bus routes; the right to a 50 percent reduction (within established norms) in payment for housing occupied by the indicated invalids and their family members living with them, and other benefits.

Benefits for the Families of Military Personnel Killed During Fulfillment of their International Duty. Parents, wives and non-able bodied children of military personnel who were killed or died as a result of wounds, shell shock, mutilation or illness received in combat actions, or carrying out other military service while fulfilling their international duty, are paid one-time benefits in established amounts.

In addition, favored terms for setting and payment of pensions for loss of the breadwinner are provided for the families of these military personnel. Pensions are granted to the wives and non-able bodied relatives of these military personnel, regardless of whether they are in dependent status. The wife's pension is granted when she reaches 50 years of age, and a pension is paid to children attending school until they complete a secondary or higher educational institution (but not after they reach 23 years of age).

The families of killed military personnel who require improved housing conditions are provided housing on a priority basis. Housing occupied by families of killed

military personnel who receive pensions for loss of the breadwinner are paid for in the amount of 50 percent of the apartment payment, and excess living space (up to 15 square meters) is paid in a single amount. They are also granted a 50 percent reduction in utilities payments. The wives and parents of killed military personnel who are on pension are granted these benefits in payment for housing and utilities, regardless of the type of pension they receive.

Workers and employees who are fulfilling their international duty are paid one-time benefits, in the event they receive wounds, shell shock, or mutilation during fulfillment of this duty. In case of their death the one-time benefit is paid to their families. The above listed favored conditions for granting and payment of pensions for loss of a breadwinner, established for the families of killed military personnel-internationalists, are extended to the family members of workers and employees who have been killed.

Other benefits. When military personnel receive serious wounds, shell shock or mutilation associated with fulfillment of their international duty, after treatment in hospitals they are sent to sanitoria or rest homes for a period of one month, without levying payment from them for the authorization. All military personnel who have fulfilled their international duty and been discharged from active military service have priority right to being provided through their place of work accomodations in sanitoria, dispensaries and rest homes. Military personnel for whom disability has been established that is associated with the fulfillment of their international duty, with the appropriate medical documents, enjoy the right to prostheses at no cost without waiting, and to obtaining a passenger car with hand controls.

After their discharge from active military service, military personnel who have fulfilled their international duty are given priority right to acceptance in gardening societies (cooperatives).

Documents on the Basis of Which Benefits are Granted. Military personnel who have fulfilled their international duty are issued certificates about their right to benefits of the established type, and those who received wounds, shell shock or mutilation during fulfillment of their international duty, in addition, are given coupons for a 50 percent reduction in payment for passage by rail or for other types of transport. These certificates and coupons are issued by military units, military commissariats and other authorized organs.

The benefits contemplated by law for war disabled persons are granted to military personnel for whom disability associated with fulfilling their international duty has been established, on the basis of the attestation of the disabled person of his right to benefits and coupons for obtaining passage tickets under favored conditions, issued by pension-issuing organs. In connection with this, the above mentioned certificates on the right to benefits are not issued.

The families of military personnel and other persons killed in fulfillment of their international duty are granted the benefits provided for by law, on the basis of certificates of the established form, issued by pension-granting organs.

9069

BMP-2 Crew Fire Training Resources

81443006 Moscow TEKHNIKA I VOORUZHENIYE in Russian No 5, May 88 pp 6-7

[Article by Lt Col V. Cherkasov: "BMP-2 Crew Fire Training Resources"]

[Text] A number of training resources—training monitors, simulators, gear for range and simulation fire—have been developed for training and practice by commanders and gunner-operators in firing from the BMP-2 [infantry fighting vehicle-2] armament.

The following training problems are worked out using the KOP-675 and 1U23 optics monitoring devices: procedure for examining the battlefield, seeking out a target and determining its importance; calculating range to the target by use of the range scale and mil formula; inputting range into the sight and selecting point of aim; preparing and operating sights in "day" and "night" regimes; and fulfilling preparatory practice firing exercises from the PKT coaxial machinegun against targets in the gunnery training facility.

The KOP-675 device is intended to monitor the actions of the BMP-2 commander when he is working with the 1P3-3 sight. The exercise leader and the student can observe the aiming mark, all scales, and the target environment simultaneously.

The actions of the gunner-operator when he is working with the BPK-1-42 sight are monitored with the aid of the 1U23 device. The operating principle and methodological capabilities of this device are the same as those of the KOP-675.

Through the use of training monitors, the class leader can observe the sight field of vision simultaneously with the student, and reveal his mistakes in sighting.

To install the optics monitoring device, it is necessary to remove the face piece from the sight, and in its place install a device (until it latches) with an additional bracket.

Each BMP gunnery training facility includes, as a rule, six each 1U23 and KOP-675 devices, as well as BMP-2 vehicles. When organizing fire training classes, it is advisable to allocate three vehicles to gunner-operators, and the rest to commanders. This is associated with the fact that the class leader can observe through the KOP-675 device eyepiece only from the position of the gunner-operator (during classes with the gunner-operator the leader observes through the eyepiece of the 1U23 device, which is located on the BMP-2 turret).

The TNO-675 gunner-operator simulator, TOP-675 crew fire training simulator, as well as the UB-675 simulator stand are intended for improving professional skills in the use of weapons under various combat conditions, without expending ammunition and combat equipment motor transport resources. They enable the exercise leader to monitor the actions of the students.

The main purpose of the TNO-675 simulator is to inculcate and improve right in class the skills of gunner-operators in firing from the BMP-2 armament.

The simulator consists of panel for the class leader, three work stations for the gunner-operators, three vibration stands, telescope carriers, power rack and set of connecting cables. Also included is a ZIP [kit of spare parts, tools and accessories] set and operating documentation.

On the simulator the students are taught how to operate the BMP-2 armament in combat and travel position, and carry out simulated fire from the BMP-2 armament against appearing and moving electronic targets, taking meteorological factors into account. Manual and programmed display of nine types of targets is provided, at ranges that correspond to the Gunnery Course. In addition, it is used to develop skills in determining the range to targets and bringing them into the sight, teach fire adjustment, and monitor the actions of the students and results of the firings.

The actions of the gunner-operator on the TNO-675 are similar to his actions on the BMP-2. The class leader assigns the students the task of accomplishing the exercise, and on the command, "Prepare for Action," they take their work places, shift the armament from travel position to combat position, open up communications via the tank conversation apparatus (TPU), and report their readiness to accomplish the exercise to the leader. At the same time, the leader, with the aid of indicators that monitor switching on the equipment systems in the fighting compartment, watches the actions of the students, and indicates their errors committed in the process (communications are via the TPU).

In the BPK-1-42 sight simulator the students see the "battlefield," with reference points, aiming mark and sight scales. This same situation is also illuminated on the video monitoring device of the class leader's panel. He gives out targets from his panel, either manually or according to a program. The student must select the main one, determine the range to it, input this range into the sight, and, bringing the aiming mark to it, press the knob for electrical firing of the gun or machinegun, depending on the type of target. Flashes occur in the operator's field of vision, and the sounds of these "rounds" are heard in the earphones of the interphone headset. Simultaneously, the trajectory of the "rounds" appears on the television screen, due to which the student sees where they struck, and if necessary makes adjustments in the aiming point. When a target is struck its image disappears for 1-2 seconds.

The class leader, switching the video monitoring apparatus on his panel to the work places of the operators in turn, can at any moment monitor the work of each.

Moreover, the simulator has an automatic system for registering the results of the gunners' fire. When knob PR on the panel is pressed, the results of operator firing are illuminated (digital depiction) on the video monitoring apparatus. The leader can press knob RM and transmit this information to the work place of the gunner, who will see it in the sight simulator.

The 9P135M launcher sight simulator is used to develop skills in firing the guided weapons. After it is prepared for launch, which is indicated by a light on the sight simulator, the leader monitors the actions of the operator from his panel, and observes on his video monitoring apparatus as he guides the target and round.

Having developed skills in firing in the "day" regime, the students switch to practice using the night sights , for which the gunner-operator switches the handle "shutter" on the BPK-1-42 sight simulator from position P to position A. When this happens the type of sight field of vision changes.

Initial firing practices are conducted, as a rule, without limiting the amount of "ammunition," either for the gun or the machinegun. As firing skills are acquired, the students switch to carrying out the Gunnery Course exercises with a limited amount of "ammunition." For this the gunner-operator's control unit has limiting switches: 16 and 24 rounds for the gun, and 50 for the machinegun.

At the concluding stage of the exercise, the Gunnery Course is carried out under complex meteorological conditions. Data on wind speed and direction and temperature are input by the exercise leader into the simulator control units.

To make the operator accustomed to working while the BMP is moving, it is advisable to turn on the drive of the vibrations stand, which imitates movement of the BMP over terrain of average ruggedness.

The leader's panel has indicators for monitoring switching on the fighting compartment equipment systems, and a video monitoring apparatus, on which the field of vision of the gunner-operator's sight, or digital information about the results of the practice is depicted.

The TNO-675 simulator is installed in a classroom no less than 30 square meters in area. The electric power of the simulator is from the three-phase alternating current industrial network, 380 volts, 50 cycles (for the vibration stand), and 220 volts (for the work places and the exercise leader's panel). The work place of the gunner-operator is on the vibration stand.

The "BMP-2 Training Fighting Compartment" (UB-675) simulator stand can be put in a school classroom, or in the BMP gunnery training facility. The students use it to study the general configuration, purpose and operating procedure of the BMP-2 systems and fighting compartment, sharpen their skills in working with the mechanisms and devices, learn inspections, adjustments and lubrication of the fighting compartment systems and mechanisms, work on meeting the norms for bringing the BMP-2 armament to combat position, stowing the battle scale of ammunition, and loading the weapon.

The simulator stand includes a BMP-2 training turret, stand, ZIP set, and operating documentation. The gun, 1P3-3 and BPK-1-42 devices, 9P135M control system, observation devices, turret communications and control equipment, ammunition stowage and ammunition supply delivery mechanism, and a VKU [video control unit] mount with cables for hook-up to a 26 volt DC circuit.

In methodological capabilities the simulator stand is identical to the combat vehicle.

The TOP-675 BMP-2 crew firing training simulator is used for comprehensive training of the commander and gunner-operator for actions with the weapons, and for firing the organic armament. It is set up in a building of the BMP gunnery training facility, and functions along with its series produced target equipment. On it the commander and gunner-operator develop skills of: actions with the organic weapons; target reconnaissance by observation and determining ranges to targets; combat firing from the PKT machinegun, day and night, against appearing and moving targets; simulated firing by the BMP-2 commander against air targets of various speeds; adjustment of BPK-1-42 and 1P3-3 sights and operating communications equipment. In addition, it makes it possible to practice meeting the norms for filling the belts with ammunition, and for stowing the ammunition load in the vehicle.

The simulator includes a BMP mockup on its own vibration frame, class leader's panel, attachment for "fire" against air targets, power rack, set of connecting cables, individual ZIP, and operating documentation.

Electric power for the simulator is from the three-phase alternating current industrial network (380 volts, 50 cycles), and from a 26 volt DC source.

The vehicle mockup corresponds to a real BMP-2 fighting compartment. With the aid of a vibration frame, it moves in the vertical and horizontal planes, at two speeds, which simulates movement of the BMP over terrain of average ruggedness in two gears.

Information about the actions of the students at the weapons is sent by cable from all the main control organs for the systems, mechanisms and instruments, to the class leader's panel. Moreover, the mockup body has six windows that open, through which the work of the students can be observed. Two-way communications between the crew and class leader areimplemented via the tank conversation apparatus.

The habitat and combat work of the crew being trained are the same in the TOP-675 simulator as in the BMP-2.

The KPK-675 set of devices for monitoring the actions of the BMP-2 gunner-operator are apparatuses for range practice and simulated fire. This set is installed in three BMPs, which are on rocking frames in the BMP gunnery training facility. It operates together with the series manufactured target equipment of the facility, and provides: monitoring (by the class leader) of the results of simulated fire—stationary, from short halts and from the move, against appearing, moving and air targets; depiction of information about the targets selected and destroyed by the students, and simulated ammunition expenditure; establishing the times of short halts and holding the aiming mark on target; and transmitting information to the class leader and student about deviations of the "round" and "bullet" from the target (overage, short, right overage, left overage, etc.).

The product includes a class leader's panel, three each beam units, firing sensors, moving target mechanisms, a photo intensifier unit, joist with air target simulators, as well as 15 beam reflectors, a set of connecting cables, ZIP and operating documentation.

The set of instruments makes it possible to conduct classes day and night. For classes under night conditions, it is necessary to adjust the set in the daytime against those targets that will be illuminated by a searchlight or rocket flare cartridges at night. A list of the work to be accomplished according to types of maintenance, and instructions to carry it out, are included in the technical descriptions and operating instructions for each product.

Mar Avn Savitskiy Responds to Article on Air Force Political Officers

18010423c Moscow PRAVDA in Russian 23 Jun 88 p 1

[Article, published under the heading "We Discuss the Theses of the CPSU Central Committee," by Mar Avn Ye. Savitskiy, Twice Hero of the Soviet Union, from Moscow: "Let Us Be More Precise"]

[Text] Let me say immediately that I am in favor of openness in the press and in favor of glasnost. But this is for glasnost in the interests of restructuring, in the interests of our common undertaking. And it is this when it is objective, well-founded and free of sensationalism.

Unfortunately, presently certain authors under the motto of truth and dependability often give superficial assessments of the events of the past and present, they limit themselves to the half-truth or at times simply distort facts. This is precisely what happened, in my view, with the author of a very interesting and bold article "On the Strength and Authority of the Party," V. Selivanov (*PRAVDA*, 2 May 1988).

Let me quote the place in this article which I have in mind. The author writes: "In military aviation I myself have heard: 'An intelligent instructor who flies brilliantly is a good candidate for flight commander, while the weakling, but quiet and disciplined should be a zampolit [deputy commander for political affairs].' I feel that the 'apotheosis' of such work was the notorious order by the Commander-in-Chief of Aviation Kutakhov about the zampolits. After a number of disasters caused by them, they made it a rule that zampolits would not be group leaders, they would not be permitted in instructor work or in planning the flight shift under the best conditions. After this was the discussion: 'How does one distinguish a commander from a zampolit?' the commander says: 'Do as I do!' The zampolit says: 'Do as I say'."

Here every sentence causes bewilderment. In more than a half-century of serving in the aviation I have met with and worked with many political workers. They have won profound respect from fellow servicemen from their unity of word and deed and by their desire to be the first where boldness, a readiness to take a risk and a personal example are required.

But what then about this reference to the order of the Aviation Commander-in-Chief Kutakhov about the zampolits? I state that there was no such order, as the author interprets it. There was a directive about the flight training of the zampolits. It stated that a predominant majority of the political workers had high flight skills and successfully mastered the new equipment and had authority among the personnel. However, it observes that some flier political workers do have an excessively large number of flying hours to the detriment of organizing party political work. In these words is there something similar to what V. Selivanov has written?

Of course, it would be possible to overlook this and all could be put to the conscience and responsibility of the author. But a shadow has been cast on the competence of the political officers, on their relations with commanders and subordinates, and a lot of nonsense has been made up about Cf Mar Avn Kutakhov who is no longer alive. And each such error or inaccuracy gives rise to mistrust in the printed word and forces one to doubt the sincerity of the writers' position.

10272

Training Shortcomings Against Low-Altitude Light Aircraft

18010423a Moscow KRASNAYA ZVEZDA in Russian 7 Jul 88 First Edition p 2

[Article by KRASNAYA ZVEZDA correspondent Lt Col O. Falichev: "A Test Target Approached..."]

[Text] The day began unpleasantly for the antiaircraft missile unit where Lt Col A. Podgornyy serves. A small target had broken through to the defended facility. At a low altitude, using the terrain, it had come through where no one expected it. This was the first time such a thing had happened in his combat experience. And the "violator" was also unusual as it was a Yak-52 which had been borrowed by the superior command from the DOSAAF Air Club. However, this was little consolation as the test target had gotten past one of the subunits.

The first on the path of the light aircraft was the battalion under the command of Maj V. Khuako. On the night before he had been warned by the unit staff that important work might be possible. And now the commander was operating the reconnaissance equipment at full power. But the minutes flew by and the indicator screens glowed with a calm greenish light. A hazy disquiet gripped Maj Khuako. At that moment, the bell rang from the PVN (visual observation post). The observer on duty, Jr Sgt V. Zvyagintsev, reported that a light aircraft could be seen at maximum-low altitude.

Maj Khuako immediately gave the command to conditionally fire on the "enemy" using the antiaircraft machine gun mount. This was done. Although with a certain delay due to the confusion of the observer. In the subunit they considered the mission carried out. But it would be hard to say what would have actually happened if one considers that the observer during all his service had fired a DShK [Degtyarev machine gun] just twice.

Such a happening is always unpleasant for the air defense soldiers. This instance forced them to reflect a good deal because the unit as a whole was, as they say, in good repute. What could be done here to exclude such things?

Definite work had been done. THe formation commander had issued an order where the unit commander was strictly reminded of the "unsatisfactory actions of

one of the subunits against the test target." Here they also mentioned the necessity of taking other important measures to improve the teamwork of the crews.

But, in skipping ahead, I should say that only a portion of these was carried out. The others, to put it simply, were forgotten. Why? In the unit the overflight by the aircraft at a maximum-low altitude was viewed as an exceptional phenomenon which had happened for the first time and would not be repeated. Moreover, the route of flight was actually not easy. Along a mountain ridge, between ravines and hills. The pilot also used other tricks. In one place, for example, he slipped by the battalion's positions behind a tall elevator and in another "took cover" behind the high-voltage transmission line.... But is it valid to set one's hopes on all these, certainly not unimportant, circumstances? All the more as they do not explain the true reason for the breach which formed in the air defense of the subunits. And this began to develop not now and even, we feel, not just yesterday.

Not even 10 years have passed since the antiaircraft missile unit was stationed here. At present, new advanced air attack weapons have appeared for the probable enemy, including cruise missiles, the tactics of combat has changed and the electronic warfare equipment has made itself felt. All of this has required an improvement in air defense and in the equipment of the air defense antiaircraft missile troops. The troops have antiaircraft missiles with great effectiveness of hitting at low altitudes, including the portable antiaircraft missile systems of the Strela type. Measures have been carried out to improve the battle orders of the Air Defense Troops. All of this is being done now. But what about the given unit?

For the sake of justice we should say that here from time to time engineer work has been carried out to improve target visibility by the radars as well as other measures. The position of one of the battalions was somewhat changed. This produced definite results. But a great deal of time has passed since then. The period of stagnation in the life of our society also left a definite impression on this process in the unit. In certain subunits nothing has changed for literally years. And this is true of the battalion under the command of Maj Khuako. The combat position was in far from the best place from the viewpoint of combating low-altitude targets as was the rest. Although, as they say, its flaws could be seen by the naked eye.

"Once in the combat training process, we picked up and moved some 400 m further north," said the battalion chief of staff, Maj V. Veliyev, "and all of a sudden we saw that the 'pcture' on the indicator screens had become much better and the station could see farther. We raised this question. But it got no farther than the unit staff...."

The years passed, the commanders changed, but everything remained as it was in the battalion. If anyone realized that there were reserves for improving the firing position, he felt that this should be the concern of the superior leadership. Such a psychology gradually became deeply rooted in the conscience of not only certain battalion officers but also in the unit. The deputy unit commander, Lt Col A. Podgornyy, for example, even now adheres to this viewpoint.

"The improving of the battle formation is not within our competence," he says.

Certainly one would not refuse an officer to become familiar with documents. And it is quite true that the solution to this question may not always depend upon the battalion or even upon the formation. But certainly does this mean that one must sit with one's hands folded and wait?

Undoubtedly, there are economic and other problems the solution to which depends upon the superior levels. But who would determine the readiness to raise a question or come forward with initiative? It is no secret, unfortunately, that we have lost this quality of assuming responsibility. But who, seemingly, if not the battalion officers and the command of the antiaircraft missile unit know better than anyone else the strong and weak points of the defenses of their subunits and who should, as they say, sound the alarm and not wait for instructions "from above"? A commander who is truly concerned for things and is worried how subordinates will carry out the battle task will never be stopped by difficulties and will do everything so that the battle position meets the increased demands.

I recall my trip to the antiaircraft missile unit which interrupted the reconnaissance flight of Powers on the U-2 spy aircraft. Seemingly the men would not have to be particularly concerned for improving the combat position as its effectiveness had been tested out in fact. But the unit commander, having assessed the terrain, concluded that individual radars were not completely successfully positioned and their positions no longer corresponded to today's demands. When this question was raised, to his amazement, it was not immediately supported. No one said that he was confused and they listened to him with attention. But no concrete steps were taken to meet him halfway. Moreover, some had clearly let it be understood that at one time smart heads had given some thought to this and hence was it worth it.... But this did not stop Viktor Vasilyevich. With his inherent directness he reported on the problem at one of the party aktiv meetings. He involved the communists from the unit. And the reply was "good." "On the other hand, I am now confident that the battle task, if need be, will be carried out as our predecessors did," Viktor Vasilyevich told me then with satisfaction. "But all the reserves are still not exhausted."

The guaranteed execution of a battle task.... Can we always give such a guarantee not only for high-quality combat work but also for our deeds and promises? Do not these breaches in defense sometimes occur first in our conscience, in our attitude toward work and to carrying out our decisions? With good reason the 19th

All-Union CPSU Conference discussed the most urgent questions of policy and economics in close relation to the spiritual sphere. At the present stage, no problems can be solved without including the intellectual and moral potential of people.

Paradoxically, the lower the order issued by the formation commander on the question of the overflight of the Yak-52 descended to the executors, the more, so to speak, its effectiveness was weakened. In the unit staff, let alone the divisions, they could not recall how its demands had been carried out. The order stated, for example, that classrooms should be organized for training the crews of operators and duty observers, equipping the PVN and improving the quality of exercises with the observers. But the equipping of the classrooms now leaves much to be desired. The PVN in certain battalions are shabby. As yet, the observers in the unit's subunits do not have modern portable antiaircraft missile systems.

As we can see, it is only half of the matter to issue an order. It is essential to see to its execution and, if need be, take additional measures. Only in this instance can one count on success. This is not a new idea. But sometimes in the routine of everyday affairs this is at times forgotten. And then scores and hundreds of various orders appear but things make no headway.

Did they know about these problems in the superior staffs? We turned to the officer of the superior staff, Col A. Zimin. He said:

"We are constantly concerned with the questions of improving the battle formation. In this unit, in truth, this work at one time was not carried out with sufficient clarity. Unfortunately, we are not always able to keep these questions under supervision...."

But, as can be seen, there is a need for this. For example, previously there were only fields and orchards around the battalion under the command of Maj A. Bolshakov. Now urban structures are close at hand. A high-voltage line runs much closer than the acceptable minimum. Its interference, in truth, they say, is not yet felt. But where is the guarantee that under certain conditions, the interference may tell on the work of the equipment and the carrying out of the combat alert tasks? Incidentally, the pilot of the Yak-52 endeavored to use precisely this factor.

The Chief of Staff of the Air Defense Antiaircraft Missile Troops, Maj Gen V. Ovsyannikov:

"The Air Defense Troops have now begun to carry out incomparably more complicated tasks than even several years ago. But the ways and methods of solving them in some places remain the old ones. This applies also to improving battle positions. Some commanders are impeded by an inertia of thought and passivity. Others by indecisiveness and a desire to avoid difficult questions. The restructuring of human awareness is not an easy matter."

As we can see, the staffs know of these problems and correct decisions are being taken. But the question of improving combat positions, as before, remains acute.

10272

Departmental Obstacles Hinder Aviation Training

18010444 Moscow KRASNAYA ZVEZDA in Russian
19 Jun 88 Second Edition p 2

[Article by Captain S. Prokopenko, Far East Military District, under the rubric "Let Us Discuss the CPSU Central Committee Theses": "A Reader Asks: How Do We Overcome the Obstacles?"]

[Text] The CPSU Central Committee Theses for the 19th All-Union Party Conference emphasize that "drastic measures are required...to overcome departmental obstacles." After reading these words, I automatically thought about how many such obstacles of all kinds we encounter in our everyday life and combat training.

One day when I was working in one of the aviation garrisons, I came across such a case. A large group of military transport pilots and navigators headed by Major P. Kozhevnikov, squadron commander and Military Pilot First Class, was getting ready for detached duty in the Baltic for flights under instrument weather conditions. A situation had developed in the regiment where a good half of the aviators had not accumulated the necessary day and night flying hours under SMU [instrument conditions] in time for confirmation of a class rating. The program for training many pilots and navigators for a second- and first-class rating was also threatened with disruption. So the transport aviators decided to "finish accumulating" flight time at one of the airports in the Baltic Military District.

The question automatically arose: how much will such a "final accumulation" affect the state? After all, a flight across practically the entire Soviet Union will need more than 10 tons of fuel and the engine capacity of expensive aircraft will be used without the proper efficiency. The reduction of the unit's combat readiness cannot be disregarded, either—a large group of well-trained aviators was forced to be out of touch with its home regiment for some time. Wasn't it really possible to confirm their proficiency at the permanent station?

It must be said that in the Far East, where this regiment is based, there are probably as many sunny days as in Yalta. And the aviators try to take maximum advantage

of any deterioration in the weather and every minute of opportunity to fly in the clouds or in limited visibility. But sometimes bureaucratic obstacles prevent them from doing this.

"The point is," Maj P. Kozhevnikov explained to me, "that those in charge at this airport are in another branch of aviation. And everyone knows that charity begins at home..."

In other words, the senior aviation officer here is the commander of another unit. And he often dictates conditions which may not be of benefit to the transport aviators' combat readiness. So they recall an instance when the strict weather minimum they wanted so much was reached at the end of the year, and it was snowing. And the transport aviators had planned flights on this very day. It seemed an ideal opportunity to keep up their level of preparation for instrument weather flights. However, Lieutenant Colonel V. Logunov, a representative of the neighboring unit, stepped in.

"You will not be flying today," he snapped. "You will roll away the snow on the runway for me, and the airfield maintenance support battalion will not have time to prepare it for our flights tomorrow."

And it happened this way more than once.

Recently the author of these lines became an unintentional witness to another highly outrageous case of the lack of interdepartmental coordination, to use high-flown words. An exercise was under way. A combat helicopter group led by officer V. Streltsov, Military Pilot First Class, was assigned to make a transit flight, to provide fire support for combat training actions by land forces and to make a tactical assault landing.

On the route across the sea, reconnaissance aircraft with U. S. identification markings flew around the group more than once, passing in the helicopters' immediate proximity. Do we need to mention how tense such a flight was for the aviators and how they needed a good rest and hospitality from those in charge of the airfield after this? However, those in charge—the PVO [A[r]Defense Forces] aviators—did not think about this. Officer V. Boyko assigned the guests to a small, unfinished building that was completely unsuitable for them to stay in. The tired helicopter crews had to spend the night side by side in a row and wash up in the morning in a nearby river. The unit commander came to visit the guests in the morning, but by no means to see to their needs. Looking for fault to find, he looked around the accommodations and warned: if something is scratched up here, he will turn the guests out, he said. Here as well, departmental interests turned out to be of more concern than the rules of hospitality and concern for combat readiness in the broad sense of the word.

But the helicopter crews' misadventures did not end here. At the height of the exercise, when they had to make an assault landing on the "enemy" airfield from a field staging area to exploit the success of the ground troops, the departure was delayed for a full 2 hours. The commander of the PVO air regiment, who had disregarded the request submitted earlier by the helicopter crews as well as the exercise plan, began changing the flying shift at this time. He did not stop to explain things to the helicopter aviators, noting that this is a problem for them, the VVS [Air Forces], and he has his own problems. Narrow local interests won out again!

As a result, the airborne assault had to be postponed for flight safety reasons. There were also other "incidents" [prokoly] in the exercises, caused by the same departmental obstacles.

Any aviator can cite quite a few cases where departmental obstacles prevent combat training missions from being carried out with high performance and lead to additional consumption of physical assets—fuel, electricity, and engine capacity, as well as to tension and wasted time. So we must resolutely break down these barriers which interfere with the work. Every communist supervisor who is guided by narrow local interests must be held to the strictest accountability for this.

8936

More Aircraft Repair Being Done in Unit Rather Than in Rear

18010444b Moscow KRASNAYA ZVEZDA in Russian 17 Jun 88 Second Edition p 2

[Article by Colonel Yu. Gerasimovich, deputy commander of the Air Forces TsGV [Central Group of Forces] for the Aeronautical Engineering Service and chief engineer of the Air Forces Central Group of Forces, under the rubric "A Problem Requires a Solution": "'Sore Points' in Repair"]

[Text] The aircraft piloted by Captain A. Glazunov received minor damage to the surfaces and fuselage in a forced landing. Not so long ago they would have sent the aircraft to a plant for repair. But now specialists of the technical operations unit (TECh) under Major L. Brilkov have restored the fighter in several days with their own resources.

And this case is not an exception. More and more frequently, specialists of the Aeronautical Engineering Service (IAS) units and subunits of the Air Forces Central Group of Forces are repairing the components, instruments, and individual assemblies in airplanes and helicopters which were being restored only at repair enterprises before. This involves primarily aircraft radio-electronic and electrical equipment and instruments, as well as aircraft armament systems. For example, at the initiative of Major V. Mikhaylov, work places were set up in the scheduled maintenance groups of the

TECh for repairing units in radar-aiming systems, which has had a beneficial effect on the subunits' combat readiness. Work places have been set up and equipped with everything necessary for the repair of infrared direction finders and couplers in aircraft armament systems, as well as discrete and integrated microelectronics items manufactured on a component basis. All this equipment was previously repaired only under conditions in fixed aircraft maintenance enterprises.

The TECh specialists recently began repairing aircraft engines as well. The scheduled maintenance group led by Captain P. Galushka has 13 repaired engines to its credit alone. A considerable amount of money has been saved. The specialists are handling such complicated operations as replacing damaged turbine blades, welding cracks on elements of afterburner contours, and certain other operations. A considerable number of examples may be cited which attest to the fact that specialists in the Aeronautical Engineering Service are successfully carrying out their mission to restore aircraft equipment which has been damaged in operation in different ways. They are continuing in a fitting manner the glorious traditions of the technicians and mechanics at the front in the Great Patriotic War, who managed to restore several tens of thousands of aircraft by making repairs with their own resources.

But I am not writing about this to boast about our successes in repairing aircraft on the front lines. Indeed, the scope of repair work on airplanes and helicopters which is being performed in the units has been significantly expanded now. But how much this costs in blood and sweat for us, the IAS specialists, at times. Sometimes we spend more time in agreeing on a problem and getting it resolved than on repairing one assembly or another.

A bird strike in an aircraft engine does not always put it out of commission, let us say. But the engine must be disassembled, since blocked cooling ducts for the turbine blades have to be cleaned in most cases. This is an operation which the TECh specialists are performing successfully. However, regulatory documents prohibit it from being performed in the units. And they send engines many thousands of kilometers away to repair enterprises, which costs a pretty penny.

Very often we send instruments and units away for repair without determining the reason for their failure. And it turns out later that the malfunction is trivial and is corrected literally in minutes. Does this mean that the TECh specialists did not finish their work? No, the majority of them are excellently trained in theory and have considerable practical experience. This happens because the diagnostic equipment in the TECh is old and does not meet current requirements. We recently paid a visit to our comrades-in-arms, the Czechoslovak aviators. And we really envied them. Monitoring and testing equipment enables the Czechoslovak specialists to gauge the parameters of engine assemblies or other aircraft equipment at any time. By having such equipment, our specialists would extend the scope of repair operations a great deal and save the considerable amount of money being spent to send aircraft components outside the unit for restoration.

And more about a "sore point." Aviation units are armed with the most up-to-date airplanes and helicopters at present. Aircraft are continually being modernized. But this cannot be said of repair equipment. It looks as if our institutions are not developing any new models of it. And here our IAS specialists have to manage with what is available and work with methods that are essentially antiquated or send faulty assemblies or instruments off to repair enterprises. But is this really in accordance with the state's wishes? Is it really more advantageous to ship equipment thousands of kilometers to a plant than to repair it in a unit?

The experience gained by IAS specialists during their service as part of the limited contingent of Soviet troops in Afghanistan once again confirms that the majority of malfunctions and damage to airplanes and helicopters can be corrected on the spot, in units and subunits. Not much is needed for this—give the specialists the appropriate repair and diagnostic equipment and the appropriate documents.

We like to hope that those who have been assigned to resolve these problems by virtue of their positions, so to speak, will finally turn their attention to the field repair of aviation equipment. This is required by the restructuring under way in the country and the Armed Forces and dictated by experience itself.

8936

Official Response to Complaint on Quality of Aviation Mechanics

18010423b Moscow KRASNAYA ZVEZDA in Russian 9 Jun 88 Second Edition p 2

[Editor's Mail "Seeking...Aviation Mechanics"]

[Text] [Editorial Introduction] Today we are publishing replies from officials and a review of reader responses to the article by Lt Col S. Levitskiy published under the title "Seeking...Aviation Mechanics" on 11 December last year. Let us recall that it raised the issue of shortcomings in the training of aviation mechanics in the training subunits and that the aviation mechanics in the units are often not concerned with servicing the equipment and they have poor special knowledge and skills. [End of Editorial Introduction]

The deputy chief of one of the main directorates of the General Staff of the USSR Armed Forces, Lt Gen I. Matveyev, informed the editors that in fact there are many unsolved problems in organizing the training process in the training units and schools of the Air Forces, the training facilities have fallen behind the requirements of the times, and the permanent personnel is not

being satisfactorily recruited. The civilian specialty of the inductees, the report points out, should without fail be considered in assigning them to the Armed Services, combat arms, as well as to the training units, as is demanded from the military commissariats by the corresponding manual on preparing and conducting induction of Soviet citizens to active military service and by the directive instructions issued by the General Staff. However, in assigning new recruits, under the conditions of the unfavorable demographic situation existing in the nation, many other factors should also be taken into account such as fitness for military service in a certain combat arm in terms of state of health and physical development, the data of vocational psychological recruitment, moral-political and professional qualities, the need to accumulate the corresponding reserve specialists in certain areas, an additional percentage for dropping out from the training units and so forth.

The Chief of the Air Force Main Staff, Col Gen Avn V. Pankin, has informed the editors that at present a long-range plan has been worked out and approved for equipping the schools with new models of aviation equipment and laboratory training supplies. Facts have been confirmed when the officer candidates from the schools have been diverted into administrative and other jobs not related to the training process while the aviation mechanics S. Palyan and K. Borovskikh were sent to sports teams under civilian organizations. Presently, these aviation mechanics have been returned to the unit and are performing their direct service duties. Lt Col V. Baranovskiy who was responsible for diverting these specialists from working on the equipment was given a disciplinary reprimand.

A plan has been worked out for integrated inspections on questions related to the preparation and use of young air specialists in their direct assignment. In 1988, they plan to revise the training programs.

The article has correctly raised the question of the manning of the schools with skilled personnel, Comrade V. Pankin has pointed out. The workers of the personnel bodies have been strictly admonished to carry out the guiding documents on providing officer personnel for the Air Forces schools. However, the example of appointing Capt N. Lyashenko to a school as a lagging officer does not correspond to actuality. Capt Lyashenko completed school with honors, he has received affirmative recommendations and has served for 12 years in the line units.

All the questions raised in the article are under the supervision of the Air Forces Command.

The Chief of the School Political Section, Lt Col V. Konstantinov, has in turn stated that all the facts were confirmed. Capt Lyashenko is not a bad specialist, but is unfit for work in the ShMAS [?aviation mechanic school]. He has been removed from the position held. Lyashenko arrived at the ShMAS with reprimands outstanding and this shows the formal selection of personnel for the aviation schools.

The article was responded to also by the Chief of Air Defense Aviation, Maj Gen Avn V. Andreyev, and from Naval Aviation by Lt Gen Avn I. Korzun. They described the search for new forms and methods of instruction at the ShMAS under their control. For example, there has been the introduction into practice of the preallocation of mechanics to the regiments and the holding of training periods there. They are planning to supply the schools with factory-made classroom equipment.

And here is the opinion of readers. Guards Capt N. Boyev writes: "Exercises for mechanics are held in our unit very rarely and sometimes not at all. The junior specialists virtually do not work on the equipment.... So I feel that all the equipment from the various subunits must be brought together at one place and their training and service must be clearly organized."

In the opinion of Maj (Ret) A. Kachasov, it is time to have in the units reliable procedures for retraining mechanics for new equipment. This still does not exist. V. Khosroyan from Minsk, I. Kuzmenko from Kharkov, F. Vasilenko from Nikopol and others in their letters voiced the opinion that it would be better to commence the training for specialists servicing expensive and complicated aviation equipment before serving in the army. Maj M. Mikhaylin feels that technicians and engineers who can no longer fly because of their health are a good reserve of instructors for the air mechanics schools. At the same time, they, as a rule, are demoted and sent to the repair groups.

We are hoping that the officials who are responsible for improving the quality of training for the junior specialists will consider the opinions and requests of the *Krasnaya Zvezda* readers.

10272

U.S. Effort in Forecasting Aviation S & T Noted

18010413 Moscow KRYLYA RODINY in Russian No 1, 1988 p 33

[Article by V. Udaltsov under "Weapons of Air Aggression" rubric: "Under the Aegis of the Pentagon"]

[Text] In the United States, under the aegis of the Pentagon, they are carrying out special so-called prognostic research with the purpose, as the journal FLIGHT INTERNATIONAL writes, of revealing the most promising technical means and directions of work in aerospace technology.

Renowned figures not only of aeronautical but also of a number of other areas of science and technology, military people as well as civilians, are being involved in the research. In 1963-1964, they carried out research under the Air Force program "Forecast 1." Its recommendations were the basis of the development of U.S. aerospace technology during subsequent years. Practically all the military aircraft now in use, the Lockheed C-5 strategic military transport aircraft, the wide-fuselage passenger aircraft, the turbojet engines with considerable use of ducted fans, some composite materials and electronic equipment, and even the air and space system "Space Shuttle" were developed taking into account prognostic research.

A symposium organized by the command of the U.S. Air Force and dedicated to the prospective development of the air forces over the next 20 years was held in Las Vegas in 1986. The main speaker, chief of the command of the Air Force aviation systems Gen L. Skantse [as transliterated], reported that the next prognostic program "Forecast-2" was begun in the summer of 1985 and that during its course they revealed the most promising directions of the work in aerospace technology through the year 2005.

L. Skantse himself managed the research. In his words, 175 outstanding military and civilian specialists and experts participated in it. There were 18 groups working in the various directions. In the course of 8 months, they examined more than 2,000 ideas and proposals. Some ideas, in the opinion of Skantse, still belong in the category of fantasy but the specialists considered very many of them to be valuable and quite realistic.

They selected 70 of the most promising and interesting proposals for further study and development. Of these, 39 deal with areas having broad applications and 31 are more restricted. They are all combined in six basic groups: propulsion systems and power engineering; materials, design and aircraft; electronics and optics; arms system; computerized data processing and means of display; means of material and technical security.

In the "Forecast-2" program, according to AIR FORCE MAGAZINE, special emphasis is being given to the importance of establishing new types of fuel and propulsion systems, above all for space systems. This is explained by the fact that such systems are linked with Pentagon plans for the realization of Reagan's "Star Wars" program. Much attention is being paid to nuclear engines and new chemical fuels with a high energy density, which promises the ability to put into space loads 10 times heavier than now. In the near future, according to the forecast, it is probable that a combined propulsion system will be built for hypersonic aerospace aircraft capable of flying at altitudes of 40 to 50 kilometers at speeds equal to Mach 8 to 12 and, if necessary, of going into space.

The creation of such a hypersonic aircraft will also become possible because of the appearance of new structural materials. They will continue the research on new light high-strength aluminum and titanium alloys, heat-resistant composite materials of the "carbon-carbon" type, metal-matrix composites, ceramics, etc. In particular, they are forecasting the extensive use of ceramics in the turbines of 21st century engines. This will make it possible to reduce their size significantly at a given thrust. To obtain materials with predetermined qualities, it is possible to apply the so-called electromagnetic joining at the molecular level.

The specialized groups examined the projects of several combat aircraft, in particular a supersonic tactical aircraft with a short takeoff and vertical landing, a hypersonic interceptor, an unpiloted high-altitude aircraft with a very long flight time, and others.

A number of projects are assigning special importance to the low-visibility technology ("stealth") in the optical and electromagnetic ranges. For this purpose, they are proposing the development of a so-called "smart skin," which will be a porous structure with a huge number of sensors and transmitting elements. Such a "smart skin" will sharply reduce the visibility of the aircraft. It will not be necessary to mount various containers with radioelectronic countermeasures. Damage to it in flight will not be very dangerous, inasmuch as all cells are interconnected.

The "Forecast-2" program strongly recommends acceleration of the work in the area of electronic and optoelectronic technology. It foresees the creation of systems with so-called "slight failure," that is, systems that allow damage but that do not fail immediately but gradually when it occurs.

In the opinion of those participating in "Forecast-2," optics is producing a real revolution in aviation. The replacement of elecronic systems through systems based on photonics will markedly increase reliability and interference protection. In comparison with electronic means of transmitting data, the use of fiber optics will increase the volume of transmitted information by a factor 10,000 and the losses of signal strength will be reduced by a factor of 100. Optical computers are capable of resolving tasks 1,000 times faster than the fastest electronic computers. The Pentagon is counting precisely on photonics, considering it the most valuable means of realizing the SDI program.

It is expected that the utilization of systems with artificial intellect will drastically improve the characteristics of reliability and material-technical security. "Forecast-2" foresees a substantial expansion of work in this area. It is recommended that systems with artificial intellect be adopted where a colossal amount of information is processed, for example in the management of combat, the piloting of aircraft, the planning and production of military equipment, etc.

The research paid most attention to the improvement of interaction in the system "man-machine." It is recommended that the prospective fighter aircraft utilize "supercockpits" for the crew, in which the usual instrument panel will be entirely absent and all necessary information in real time will be transmitted to the pilot's helmet display. Experimental models of such helmet systems utilizing microprocessing technology are already being developed. According to the journal FLIGHT INTERNATIONAL, the aircraft pilot of the 21st century will operate weapons and on-board systems by voice or a glance.

The concluding portion of the report stresses that the realization of the ideas proposed in "Forecast-2" will help to ensure the military superiority of the United States over the Soviet Union. General Skantse shared his dream of the establishment of a lead of no less than 10 years over the USSR in aviation technology.

9746

Baltic Fleet Exercises Held 6-8 Sep

Unequal Naval Balance in Region

LD0909140288 Moscow TASS in English
1259 GMT 9 Sep 88

[Text] Tallinn September 9 (TASS)—By TASS special correspondent Vladimir Isachenkov:

A missile cruiser and two escort ships were sailing over a mine field, following mine-sweepers. Hardly had they passed the dangerous area and taken up formation, as "enemy" strafing jets roared over them. The ships responded with a missile volley and intense antiaircraft artillery fire.

This was one of the scenes which Soviet and foreign journalists could see at an exercise of the Baltic Fleet. The exercise was held in the northeastern part of the Baltic in Soviet territorial waters on September 6-8.

"We were waiting for an arrival for the exercise of observers from the GDR, Denmark, Iceland, Norway, Poland, Finland, the FRG, and Sweden which had been officially invited by the Soviet Foreign Ministry back in July," says Admiral Vitaliy Ivanov, commander of the Baltic Fleet. "However, the invitations were answered only by the GDR and Poland, while Denmark, the FRG and neutral Sweden preferred to dispatch reconnaissance ships to the border of Soviet territorial waters. The USA and other NATO countries reject the very idea of talks on cutting navies and spreading confidence measures to navies."

This position of the West is explained by the fact that the NATO countries exceed the Warsaw Treaty countries in the strength of naval personnel by 4.5 times, the number of ocean-going ships 7.6 times, and the gross tonnage of ships 3 times. The U.S. "new sea strategy" presupposes establishment of control over all areas of the world ocean. Ocean-going ships make up 65 per cent in the ship composition of the U.S. Navy, and ships of coastal operation, 6 per cent.

On the contrary, the Soviet Navy, apart from submarines with ballistic missiles which are subject to talks on cutting strategic weapons, is assigned for the defence of Soviet coast. 52 per cent of warships are vessels of coastal operation and only 12 per cent are ocean-going ships. The USA assesses the Soviet-proposed measures on limiting naval activities as "unbalanced" due to U.S. superiority in ocean-going ships.

Admiral Ivanov told journalists that in line with the defensive doctrine declared by the Warsaw Treaty countries, the Baltic Fleet forces are primarily of coastal operation and are assigned for the defence of Soviet coast. Therefore, the fleet's exercises have been held only in the proximity to Soviet naval bases on the Baltic.

CINC Baltic Fleet: Fleet Serves as Coastal Defense

LD0709222788 Moscow TASS in English
2143 GMT 7 Sep 88 txt
[Text] Tallinn September 8 TASS—TASS correspondent Vladimir Isachenkov reports:

"The Soviet Union holds that the problem of the reduction of naval forces should also be discussed in the present conditions when negotiations on the reduction of armed forces and conventional armaments in Europe are conducted," said Admiral Vitaliy Ivanov, commander of the Baltic Fleet. He spoke here on Wednesday evening at a news conference in connection with the exercises of the Baltic Fleet held now.

The world ocean is a zone where large naval groups of NATO and the Warsaw Treaty get into contact. Therefore the risk of an outbreak of military conflict is particularly great there, the admiral said. However, having the advantage in the offensive naval forces, the preponderance in missile armaments, the United States sidesteps the very idea of the reduction of naval forces and avoids any talks about this. [Word indistinct] is striving for the lessening of tension in the Baltic Sea. A concrete programme of measures in this area was set out in the speech Mikhail Gorbachev made in Murmansk.

The exercises of the Baltic Fleet are held only close to Soviet naval bases, the commander said. Meanwhile action of the United States and other NATO countries increase tension in the Baltic: The exercises of their naval forces are held close to Soviet territorial waters, in the area east of the Borgholm Island. NATO planes fly on missions from the airfields in Jutland into areas of the Soviet naval bases of Baltiysk and Liepaja. U.S. battleship of the Iowa type armed with cruise missiles with a range of about 2,600 km enter the Baltic Sea.

The forces of the Baltic Fleet are meant for ensuring the defences of Soviet territorial waters, Admiral Ivanov said. "As the commander of the fleet I can say that the quantitative composition of the Baltic Fleet is not built up", he stressed. "What is more, it is reduced when ships whose service life ended are removed from the composition of the fleet. They are replaced with the vessels of only those classes that are written off, and in the same numbers. As to the correlation of forces in the Baltic, it is approximately even, naturally, if the naval forces of the USA and France are not taken into account".

Naval Maneuvers in Baltic Sea Set for 6-9 Sep

LD0609180088 Moscow TASS International Service in Russian 1723 GMT 6 Sep 88

[Text] Tallinn, 6 Sep (TASS)—TASS correspondent Vladimir Isachenkov reports:

From 6-9 September the Baltic Fleet is conducting tactical exercises in the northeastern sector of the Baltic

Sea, the aim of which is to further improve the tactical maneuvers of various components of the fleet's forces. Thirty-two warships, 26 aircraft and helicopters, and about 2,500 men will take part in the exercises. Admiral of the Fleet Vitaliy Ivanov, commander of the Baltic Fleet, is directing the exercises.

Military observers from Poland and the GDR, as well as a group of Soviet and foreign journalists, will observe the ships' operations. On 7 September journalists will be given the opportunity to look around the Baltic Fleet warships—the missile cruiser "Groznyy," the escort vessel "Bditelnyy," and a missile launch. After this, press representatives will observe at sea the operations of submarine forces: search and attack of a submarine and a submarine counterattack. On 8 September they will see an operation with ships being taken through a mine field and repulsing an enemy aircraft attack.

As is known, the USSR does not conduct naval maneuvers in the North Sea or the western sector of the Baltic Sea. Exercises are conducted only in the area of the USSR's naval bases in the Baltic.

Means for Missile Destruction Described

LD0309023088 Moscow TASS International Service in Russian 1818 GMT 2 Sep 88

[Text] Moscow, 2 Sep (TASS)—Correspondent Mikhail Zakharchuk reports:

The Soviet nuclear missile shield—the strategic parity that we achieved—was the reliable and firm foundation on which the new political thinking grew in the world and the opportunity appeared for reversing the exhausting arms race. As soon as the Soviet-U.S. treaty on intermediate- and shorter-range missiles was signed, those at the Main Staff of the Strategic Rocket Forces started thinking about how to scrap their dear—in the direct and figurative sense—weaponry.

At the beginning of the year, a center was set up in the USSR for implementing the elimination of intermediate-range missiles. By special order of the commander in chief of the Strategic Rocket Forces, about 100 of the best officers from combat units and subdivisions, the best trained and most enterprising, were selected for the center. Colonel Aleksey Gutnikov has been entrusted with commanding the unusual subdivision. It is symbolic that the center has been accommodated in the same building in which the entire strategic rocket forces command is situated.

Should anyone imagine that destruction is not constructive, then with regard to missile technology—which has absorbed the very best of human intellectual capacity—this is at the very least a naive delusion. Nuclear delivery vehicles are so complex that it takes a virtuoso expert to dismantle them. For example, an R-12 [SS-4], which uses liquid fuel, can be bled. Then, when the elements of the guidance system have been removed, the rocket can be broken up using air plasma cutting equipment. The solid-fueled RSD-10 [SS-20] is much more complicated, and the center's officers have had to work hard. In principle, it is not possible to cut this missile up. They ended up with two ways of eliminating it: launching it, or blowing it up.

The first method was not new to missile experts. All of them had been present at training launches, but it was only permitted to destroy around 200 missiles in this fashion. There were quite a few complications that arose in connection with the exploding of the remaining 600 vehicles. In the first experiments, it was found that sizable pieces of fuel remained scattered all over the firing range after the explosion. Some sort of explosion technology had to be developed that would ensure the complete destruction of the fuel and the metal body parts. The center's officers managed to cope with the task in record time.

Parallel with the development of technology to eliminate missile systems, bases for the destruction were built at settlements near Chita, Lesnaya, Sarny, and Kapustin Yar, Kansk, and other places. Technical facilities and housing were built here very rapidly, the bases were manned and fitted out with special technology, and roads and communications lines were brought to them.

Tension at the center reached its height at the end of May this year, when the Ministry of Defense and the leadership of the USSR National Center for Nuclear Danger Reduction made the decision to show radio and television journalists from a number of Western countries the state of readiness of the base for eliminating means of transport in the town of Sarny in Rovno Oblast.

Under the command of officers from the center, the elimination of three intermediate-range missiles took place for the first time ever at the Kapustin Yar testing range, using the explosion method. Among the 200 observers from 51 states was Miljan Komatina, secretary general of the Geneva Disarmament Conference and the UN secretary general's personal representative. He told Soviet journalists that the missile experts had arranged everything splendidly, and thanked his hosts at the testing range for their warm welcome.

Incidentally, the events at Kapustin Yar summed up, in a sense, the first stage in the verification [proverka] of implementation of the Soviet-U.S. treaty on intermediate- and shorter-range missiles.

Gorkiy Factory Group Stresses Emergency/Recovery Work

18010459 Moscow SOVETSKIY PATRIOT in Russian 10 Jul 88 p 3

[Article by N. Korchagina under the rubric "Civil Defense," Gorkiy: "Using the Best Version"]

[Text]Georgiy Vasilyevich Shchepetkov did not expect to become a staff civil defense worker. He had served many years in the army. He was released into the reserve with the rank of lieutenant colonel. He had been serving as senior instructor at a military school. He had to begin his new life somewhere. He was offered a job at the Orbita plant in Gorkiy.

Shchepetkov was lucky at the plant. General Director L. Kuranov and Civil Defense Chief of Staff S. Ignatyev, competent and concerned individuals, were his mentors. They solved all pressing problems thoughtfully and earnestly, and demanded the same of their subordinates. It was under their supervision that Georgiy Vasilyevich began organizing and conducting various civil defense activities—first in Shop No. 3; a half year later, for the whole enterprise.

"There is no denying the fact that some of the workers do not take civil defense seriously," Shchepetkov reflects. "Why is that? Because they have been assigned only one mission for a long time: to be prepared for an unexpected enemy attack. But what if there is none? After thinking it over, the former director and I decided to develop the plant workers' civil defense skills in the actual situation. And when a highway near the plant tourist center was washed out by a spring flood, the alert was sounded for the nonmilitarized formations. They were assigned the mission of repairing the road and reinforcing the river bank. The personnel successfully accomplished the mission, operating smoothly and competently."

"This was the first exercise conducted for the enterprise," Yu. Spiridonov, assistant civil defense chief of staff, recalls. "Since then, going on 4 years, Georgiy Vasilyevich has included in each comprehensive exercise, in addition to activities specified in the civil defense plan, also practical emergency restoration work."

Fightingmen of the nonmilitarized formations laid 450 running meters of pipe during the repair of the main pipeline. They dismantled a mortar plant and cleared a site for the construction of a new building. One winter, when hundreds of people were left without heat, they also helped to mop up following an accident in Leninskiy Rayon.

After thoroughly studying the production process at the enterprise and the work schedule of the blue- and white-collar workers, Georgiy Vasilyevich came up with the optimal plan for involving the formations in special tactical exercises and practical training. For this purpose he worked up special schedules for the shops, taking production interests into account.

Shchepetkov has succeeded in proving that it is essential to have emergency rescue groups at the plant to perform unforeseen, emergency work on holidays and days-off. On the day they are on duty, and this is assigned according to a schedule, all eight members of the group must remain constantly at home. When a pipeline burst one Sunday evening, the commander of the emergency rescue group notified the personnel according to a special chart.

Within an hour the rescue workers had arrived at the plant and taken care of the emergency. They have also been alerted for clearing away snowdrifts, unloading urgent freight....

The Orbita is one of the best civil defense facilities in Gorkiy today. Its training center is regularly used for conducting civil defense training for the supervisory staffs of large enterprises and the leaders of oblasts, rayons and cities. They do not make advanced preparations for the arrival of the strict commissions there. At any time, however, they can show any shelter compartment, for example, constantly ready to receive blue- and white-collar workers. The displays have been updated in the six special classrooms.

"Our duties are precisely delineated at the civil defense headquarters," Shchepetkov says. "Take Yuliy Grigoryevich Spiridonov, for example. All of the training is in his hands. Andrey Dmitriyevich Rozhkov is responsible for maintaining the shelter. Aleksey Mikhaylovich Ananyev handles reconnaissance, communications, evacuation...."

Shchepetkov and his assistants enlist the leaders of public organizations in the decision-making for various civil defense matters. O. Yelkina, chairman of the primary DOSAAF organization, and Hero of the Soviet Union P. Aristarkhov, chief of the training center, for example, have been invited to serve as umpires in exercises, to be in charge of the civil defense tests and the meeting of the civil defense norms. They all work together to set up the classrooms, present the lectures, conduct classes....

The plant's civil defense staff workers regularly meet with the secretaries of primary party organizations and the deputy commanders for political affairs of the formations to make decisions on current matters. And no one divides the problems up into "ours" and "theirs."

"The civil defense staff takes the initiative in many of our joint undertakings," says A. Shulepov, chairman of the plant trade union committee. "And it is to the staff's credit that we have annual competitive reviews for best performance of civil defense missions and for the fact

that the points in the civil defense socialist commitments in the plant competition are evaluated on the same level as the production commitments...."

A. Ovchinnikov, facility civil defense chief, has headed the plant group for a year and a half. He has already managed to conduct a comprehensive exercise and to take part in a plant-wide drill, however.

"A person is best defined by his attitude toward the assigned job," Anatoliy Fedorovich says. The distinguishing qualities of the chief of staff—conscientiousness, an acute sense of personal responsibility and a love of order—were demonstrated during preparations for the exercise.

In that exercise the blue- and white-collar workers had to take shelter quickly at the "air alert" signal. They could no doubt have gotten by without rehearsals. At the Orbita, however, it was decided to conduct special drills in advance. And these were preceded by a great deal of explanatory work. Shortcomings were revealed: the flow of people was too great in one of the shelter's compartments. Not all of the people knew their assigned places. During the exercise itself, however, even the blue- and white-collar workers from the most remote shops were able to get to the shelter within the prescribed time.

The civil defense headquarters is the real guiding center of the many- thousand-strong collective. The subunit chiefs of staff meet there every month to plan the next activities, to sum up what has been accomplished and receive methodological recommendations and sample documents. They are aided a great deal by a chart for fulfilling the civil defense plan worked out by Shchepetkov. It is a precise table graphically showing which service must be doing what at a specific time.

The position of civil defense chief of staff involves a great deal of work. The civil defense formations have just performed a plant-wide exercise, but they now have to get ready to operate as part of a composite, rayon mechanized detachment. Nor can the trip to a Pioneer camp be postponed. It has been decided to complete some radiation shelters there. And what about the everyday work? An address from the plant radio station, preparations for the next classes.... Georgiy Vasilyevich admits that he likes the work, however. This means that none of the tasks are a burden.

11499

Army Gen Govorov on Restructuring of CD in Terms of New Defensive Doctrine

18010386a Moscow VOYENNYYE ZNANIYA in Russian No 4, Apr 88 pp 1-2

[Article by Arm Gen V. Govorov, chief of USSR Civil Defense: "At a New Stage"]

[Text] Restructuring in all spheres of the life of our society, which is unfolding on the initiative and under the leadership of the CPSU, has become a reality. Organically linked to the life of the people and serving its interests, USSR Civil Defense is participating aggressively in this process and is implementing measures for a radical restructuring of its activity.

Shortcomings of the period of stagnation did not bypass us. Our own omissions were added to it both in strategic questions on the construction and development of civil defense and in questions on the tactics of executing its tasks and measures.

One should not fall into extremes and deny all that was achieved in previous years. However, a sober evaluation and even re-evaluation of everything that was done before, proceeding from the demands of the times and the new conditions of the life of the country and society, is a more constructive approach.

Soviet military doctrine forms the basic conditions for the activity of the USSR GO [USSR Civil Defense], in particular its strictly defensive nature and the principle of adherence to the limits of sufficiency of measures for the defense of the country. In this process, we also must not permit less security for the Soviet people. Despite the steps being undertaken by the party and the government, a tense military and political situation remains in the world. The threat of the emergence of conflicts with the employment of the newest means of armed struggle, producing enormous destructive and devastating effects, has not been eliminated. It is impossible not to take this into account.

Thus, the quantitative and qualitative changes in the means and methods of armed struggle in the present stage predetermine the necessity for corresponding changes in the tasks, organization and conduct of civil defense.

On the other hand, acceleration in the speed and expansion of the scale of scientific and technical progress and production activity under modern conditions is inseparably linked to an ever-increasing use of complicated technical systems, an increase in the risks of their operation and, consequently, to a real threat to the health and life of people, the environment and the normal functioning of industry.

We will recall what enormous resources and efforts were required to eliminate the after-effects of the accident at the Chernobyl AES [nuclear power station]. For many months there was a break in the normal rhythm of economic activity of major regions of our country and of many elements of state administration. A large number of managers, scientists, builders and physicians and other specialists had to be diverted from regular work, and materials, equipment and transport systems not anticipated in plans had to be utilized.

Appearing on television in connection with the Chernobyl events, M. S. Gorbachev said: "We think that the

Chernobyl accident, as well as accidents at American, British and other nuclear power stations, confront all states with very serious questions that demand responsible treatment. . .

For us, the indisputable lesson of Chernobyl is that under conditions of further development of the scientific and technical revolution, questions of equipment reliability and safety, and questions of discipline, procedures and organization take on paramount significance."

These circumstances also stipulate the need for new approaches on the part of party, soviet, economic, and military organs, and all citizens of our country, to questions of civil defense, the resolution of tasks to provide reliable protection of the population, efficient functioning of the system of control under any emergency situation, and the preservation of socialist property.

It must be acknowledged that many organs of control and the forces of GO [civil defense] do not at the present time satisfy such high demands. By far not all managers of various ranks have recognized their personal responsibility for the condition and readiness of civil defense in assigned sectors; they display complacency and unconcern, and they underestimate the real degree of danger in both an industrial and military situation.

Unfortunately, many examples of a negative character can be cited. But it is not they but the trend that has emerged that is the point. And it attests to the fact that restructuring must be conducted not only in the sphere of the theory and practice of civil defense, but also in the conscience of people, in their views about the role and importance of protective measures in emergency circumstances both in peacetime and wartime.

Naturally, restructuring demands distinct and clear theoretical concepts. The humane essence of civil defense forms the basis of their elaboration and development: concern for people's lives and their protection under conditions of the effects of destructive factors of a military, industrial or natural character.

The new task in protecting the population from the destructive action of accidents, catastrophes and natural disasters, and the conduct of rescue and other urgent work in the course of eliminating their after-effects, raises the requirement for the readiness of GO organs and forces, increases the responsibility of managers for the correctness and timeliness of adopted decisions, and has a bearing on a number of the most important social measures for safeguarding the lives and activity of citizens of the USSR. All of this is now being put into legislative, directive and standard documents. It is intended that they specifically reflect the duties, rights and responsibilities of officials and all citizens for the fulfillment of protective measures.

Considerable attention is being given at this time to a calculation of the changes that are taking place in the economic mechanism of the country. Together with territorial and departmental organs of the national economy, we are specifying their functions and tasks, procedures for the creation and utilization of forces, questions of organization and the implementation of GO measures. This is vital and creative work. Much will spring up on the initiative of the population itself and on the initiative of labor collectives of enterprises, organizations and institutions.

Of course, this should not be interpreted as a call for spontaneity. General principles on the organization and conduct of GO at the present stage, of course, will be established. But the practice of applying these principles, and taking into account the specific factors of time and place, cannot be realized without the creativity, initiative and aggressive action of people.

Certain changes will also occur in the organs of control of civil defense. They have to be brought closer to the new tasks and to practical work. A special role is being assigned to the rayon and city echelon. With due regard for raising the pay of workers of these organs, we have a right to count on their increased activity in the matter of restructuring GO on the spot.

We also have to specify the structure and composition of GO forces in order to increase their readiness and ability to act when tasks arise all of a sudden. The principal requirement of the time—reality and competence—must permeate all work in the creation, equipping and training of nonmilitarized formations at facilities of the national economy, taking into account regional and departmental features and capabilities.

A special place in the improvement of civil defense is assigned to restructuring the training system. Its principal goal is to increase the quality of training and to impart to the trainees skills for practical action in emergency situations. It seems that here we cannot do without the activity and restructuring of the consciousness of the population itself. Taking the high level of education of our people into account, we must more boldly and broadly practice independent training and self-education, and more aggressively involve the population in large-scale measures that are suitable to actions in emergency situations. We also must approach the evaluation of the GO knowledge and skills of people in a more demanding way when checking their professional training, actively assisting them by supplying literature and visual aids, and by organizing practical measures. Of course, a transition period and broad experience and experiment is needed in this matter. We should finish this stage in a year.

We must more aggressively and exactingly conduct the GO training of managers and command personnel for the purpose of increasing their competence in managing people in emergency situations. In this connection, we will have to specify the tasks and level of activity of GO courses and restructure their work, taking into account

the decisions of the February (1988) USSR Central Committee Plenum.

Seminars, short exercises and training drills should be used more widely in training in GO courses. In other words, primary attention should be given to the development of solid skills that make it possible to fulfill the functional duties of a given GO position with confidence. Unquestionably, to achieve these goals we have to raise the effectiveness of the methodological and training assemblies of supervisory personnel, commanders and chiefs. It is necessary to sum up what was accomplished in the year in order that, by comparing, one can clearly see what has not been done yet and what still has to be worked on. However, it would be advisable to devote the main time to a broadening of the operational-tactical mental outlook and improving the habits for action under various conditions and in abnormal situations.

A lot remains to be done in improving the GO training process in VUZ's, technical schools, vocational training schools and general schools. The more effective the training is, which begins on the school bench, the firmer are the GO skills and knowledge in all aspects of labor activity.

At the present time, new efforts are being taken for the future development and effective utilization of the civil defense technical and material base: collective and individual means of protection, equipment, instruments, property and other material resources. All of the means and resources created for these purposes must actively ensure a resolution of civil defense tasks. In this process, the most important principles of comprehensive and coordinated utilization of allocated resources will be fulfilled: the mandatory use of everything that is created for civil defense in the interests of the national economy and the population, and also consideration of GO requirements and needs in the course of the economic and social development of production, and the development of technology, instruments and property.

Together with this, questions that take on important significance are the preservation of these means and resources, their proper operability and their readiness for immediate use. Unfortunately, there are very many examples of negligent handling of protective installations, property and other means. Under conditions of full cost accounting and self-financing, managers of facilities of the national economy and their labor collectives must approach problems of maintaining and operating shelters and covers and the storage of civil defense property in a different way, from a position of exactingness and zeal.

I will note that the resolution of today's tasks is inseparably tied to the future strengthening of party influence on all aspects of our life. It is the communists who by their personal example and attitude to the problem must see to it that political education work carries in itself the impetus for a renewal of thinking and that it mobilizes the people for creative initiative. The human being and his concerns and hopes must be at the center of all ideological work.

To ensure a more active participation in civil defense measures by the entire population, there must be intensified work on the part of party, soviet, trade union and Komsomol organizations, and also all labor collectives, in the training of personnel of the organs of the GO forces and of all citizens who have a responsible attitude toward protective measures as their most important obligation and patriotic duty.

As we see, the range of questions, which we have to resolve in the radical restructuring of GO, is broad and diverse. The work we face is truly vast and, I would say, selfless. We have just started it, and everything still lies ahead. And it is necessary to urge that restructuring is not a stroll along a smooth path. The leading role here belongs to chiefs of GO of the republics, krays, oblasts, ministries and departments, rayons and installations and GO control organs. They have to be a kind of generator for the realization of the appropriate requirements of the party and the government.

GO workers have a lot to do in explaining to labor collectives and the entire population the daily tasks of civil defense and the essence of its restructuring. Unfortunately, competence and the ability to carry on a dialogue with the people and to convince them is by no means possessed by all of our comrades. Let us take as an example the approach to cutting the administrative apparatus of the ministries, departments, institutions and organizations. In some places they found nothing better to do than to abolish worker positions in civil defense. Apparently this is a direct result of complacency.

We should all understand that restructuring concerns each GO worker and each citizen of the Country of the Soviets. Any one of us is answerable for everything. We are comitted to this by the acuteness of the time in which we live. The significance of high discipline and the personal excellence of each person is very, very great. It seems there is no need to convince anyone of this. For many, the memory of the grim lessons of the Great Patriotic War is still fresh. Nevertheless, under peaceful condititions we have to face facts when the negligence of individual workers reduces to naught the efforts of an entire collective.

Overcoming the forces of inertia in the resolution of imminent problems is a matter of our honor. And we have to apply all of our strengths to fulfill tasks that have been entrusted to us. And this will be a concrete contribution to restructuring civil defense and to increasing the readiness of its forces for action in any situation.

13052

Col Gen Ryakhov on Greater Role of Schools in Command Training

18010386b Moscow VOYENNYYE ZNANIYA in Russian No 4 Apr 88 p 23

[Article by Col Gen A. Ryakhov: "How They Cut the Department"]

[Excerpt] That is the headline under which the article was printed in the journal VOYNNYYE ZNANIYA in issue No 8 for 1987. Issues No 1 and 3 of 1988 published reader replies that were forwarded by the Ryazan All-Union Institute for Increasing Qualifications, the chief of educational-methodological administration, USSR Gosagroprom [State Agricultural Industry], and USSR GO [Civil Defense] headquarters.

USSR Civil Defense Headquarters

Col Gen A. Ryakhov, deputy chief of USSR Civil Defense, reported that the leadership is disturbed by the groundless reduction of departments of civil defense in training institutions for raising qualifications, because this worsens the preparation of GO [Civil Defense] management and command staffs.

An actual evaluation of the actions of management and command personnel during the emergence and elimination of the aftereffects of accidents, natural disasters and catastrophes discloses their weak knowledge and skills in the organization and conduct of rescue and other emergency operations. And the sluggish and indecisive actions of supervisory personnel, as a rule, lead to sacrifices and large material losses.

At the present time, as never before, the question about raising the quality of civil defense training for management and command staffs becomes critical. Training should be conducted only by well-prepared and experienced GO teachers who know the specifics of the field to perfection.

From the Editorial Staff

The cited answers speak about the fact that there is no unity at even the highest echelons as to the role that should be played by educational institutions for raising qualifications in the specialized training of civil defense management cadres. The economic reform and the Law on State Enterprises (Associations) narrows the possibilities of conducting planned training of GO management and command personnel without detriment to production. And in this situation there is an increase in the significance of educational institutions for raising qualifications as profile educational institutions where the training of cadres should be improved for competent participation in work on the elimination of the aftereffects of accidents and natural disasters.

Apparently, it is necessary that the created USSR State Committee for National Education and the USSR GO headquarters, jointly with interested ministries and departments, develop a single policy that responds to current requirements in training supervisory workers and specialists of the national economy in civil defense matters.

13052

Col Gen Ivanov Concludes Discussion of Lessons from Chernobyl

18010386c Moscow VOYENNYYE ZNANIYA in Russian No 4, Apr 88 pp 26-27

[Article by Col Gen B. Ivanov, Hero of the Soviet Union: "Chernobyl"; Conclusion. For the beginning of this series see 1988 issues 1-3]

[Text]

4. Elimination of Aftereffects

In implementing measures envisaged in a specially developed plan in case of an emergency, it was disclosed that the activated forces and means were clearly inadequate. The authors of the plan, and also the higher authorities who approved it, did not anticipate one very important fact—the possible scales of an accident. But it was long before the development of the document that the leadership of USSR Civil Defense paid very serious attention to this question. The question was that in compiling a plan it is not possible to be guided by the assumption that the scale of an accident, should one occur, will be restricted to the territory of the AES. At that time, G. Shasharin, the deputy minister of the USSR Ministry of Power, noted that this was ruled out. We also did not receive support from the USSR Academy of Sciences. And then Chernobyl gave us an object lesson. The scales of the accident proved to be so great that they refuted the opinions of some authoritative specialists and the calculations that were made in conjunction with them. In a word, life made fundamental amendments to the plan.

Lines from a Journal. The situation at the AES is extremely complicated. The question about the localization of reactor activity arose at the very first meeting of the governmental commission that was held on 26 April. Attempts to cool it with water did not bring positive results.

In order to reduce radiation escape over the nuclear core, it was decided to create a shield from sand, clay, borium, dolomite, limestone and lead. All of these components are to be dropped into the reactor crater (that is what they called the space formed in the upper part of the structure at the time of the explosion.—B. I.) from helicopters.

Owing to the energetic measures taken by members of the governmental commission, party and soviet leaders of the republic, it was possible quickly to organize the delivery, unloading and storage of required materials. Sand was brought in from the shores of the Pripyat. But there are difficulties here as well. . .

There really were difficulties. And first and foremost with packing materials in bags and loading them onto helicopters. Not enough people were assigned to do this. There were also those who simply refused to do this work, citing the vagueness of the radiation situation and other reasons.

Soldiers of one of the units of the Kiev Military District and workers from Chernobyl and its surroundings helped us get out of the "breakdown." They worked intensively and wholeheartedly. And their selfless efforts were crowned by the heroic work of the helicopter crewmen who were commanded by Maj Gen Avn N. Antoshkin, who was subsequently awarded the title of Hero of the Soviet Union. The crews of the rotary wing aircraft had to execute a task that was unique in its complexity: to drop the bags with maximum accuracy into the reactor crater from an altitude of 200 meters under conditions of strong radiation.

At first they dropped the bags into the reactor manually. This method was not very effective. And then Nikolay Trofimovich Antoshkin proposed that aircraft brake parachutes be used as containers. This was reported to Mar SU S. Akhromeyev, chief of the General staff of the Armed Forces of the USSR. He approved the idea and issued the necessary instructions.

With the help of brake parachutes (and later also supply-dropping parachutes issued on the instructions of the commander of the VDV [Airborne Assault Troops] the work went faster. For a short time it was possible to cover the upper part of the reactor with thousands of tons of protective materials.

Along with "plugging" the crater, another very important task was resolved. There was a multi-ton, high temperature molten mass in the interior of the reactor. And there were tons of water under the bottom. It is not difficult to imagine what could happen if the bottom did not hold and the melt came into contact with the water. This is why it was necessary to pump the water out from under the reactor basin as fast as possible. This task was performed by firefighting subunits of civil defense. Subordinates of Lt Col V. Primak especially distinguished themselves. Because of the increased radiation background, they had to work for several minutes at a time, relieving each other in the process. Despite this, the soldiers laid several kilometers of hose, set up the necessary equipment and successfully coped with the task. But soon specialists arrived on the job who had to place a reinforced concrete cushion under the reactor and install a system of forced cooling.

Lines from a Journal. Thousands of people and hundreds of vehicles are participating in the elimination of the aftereffects of the accident on the territory of the AES. All of the specialists are provided with the necessary material resources properly, and the equipment is serviced with fuel and lubricants. Feeding the workers and providing them with daily necessities are well organized.

The Ukranian GOSSNAB [State Material and Technical Supply] opened up a supply center which works around the clock. Orders from organizations are quickly and effectively filled and to the fullest extent. Cargos are arriving without delay. But their receipt and distribution are not being carried out with adequate efficiency. At times the customers are to blame by not ensuring reception of the ordered equipment. Cargo acceptance needs to be centralized.

Life itself, as the saying goes, urged me on to come to this conclusion. At my request 50 KrAZ vehicles were allocated on 4 May by the Kiev Oblispolkom for the construction of a dam around Chernobyl. On the arrival of the column of vehicles at the designated place, one of the members of the governmental commission decided to send it to the railroad station at Vilcha for the transport of cargo that arrived for the AES. I learned about this accidentally, and I was able to return the KrAZ's.

Such incidents arose more than once, and they contributed to disorganization in the work and were a distraction from urgent matters. But owing to measures taken by V. Masol, chairman of the UkSSR Gosplan, centralized ordering, reception and distribution of cargos was organized, and their dispatch according to destination was arranged properly.

It should be noted that to intensify supervision of the work at the reactor, to coordinate the efforts of specialists from various ministries and departments, and to organize their cooperation, a decision was reached to create a command and control post (PU). I. Silayev, deputy chairman of the USSR Council of Ministers, who replaced R. Shcherbin on 3 May in the post of chairman of the governmental commission, instructed that such a post be set up directly at the AES and to begin work at it by 0900 hours on 7 May. The immediate organization of the PU was entrusted to Col V. Dolgopolov, chief of USSR GO administration. He was given a team of communicators headed by Maj S. Butuzov with a special communications vehicle and a chemical-dosimetry crew on an armored transporter. Capt 2d Rank G. Filimonov was detailed by the chief of chemical troops of the USSR Ministry of Defense to organize radiation safety for those working at the station. Appropriate specialists and planners were put on the PU staff, and also the newly assigned AES management.

Those under the command of Lt Col V. Primak, who up to this time worked on pumping water from under the wrecked reactor, provided substantial assistance in preparing a protective structure for the PU. In short, the

assigned task was accomplished, and the PU which was skillfully managed by Col V. Dolgopolov became, figuratively speaking, the generator which imparted the necessary impetus to eliminate the aftereffects of the accident.

Lines from a Journal. By 8 May pumping water out from under the reactor was essentially completed, and the soldiers of the engineering troops began to dig out the foundation area for a tunnel under the reactor. A whole day was spent to disassemble the reinforced concrete which was "buried" when the AES was being built.

Work was begun on constructing a "sepulchre" to bury the radioactive structure and elements of the reactor building. Specialists from the Ministry of Coal Industry are readying the assembly of a pipeline for pumping a special concrete solution under the damaged reactor.

The aforementioned journal entry relative to the pipeline, in my opinion, needs some explanation. The fact is that to assemble a pipeline under those conditions was far from simple. First of all, it was planned on 9 May to punch a hole with the help of directed explosions in the thick walls of the rooms of the third and fourth power-generating units, and only afterwards to carry out equipment assembly. It was planned to begin the explosive work, which was supervised by Mar Engr Trps S. Aganov, at 1400 hours. But for some reason they did not notify the chief of the command and control post, although there were instructions from the chairman of the governmental commission that all work (except work on the operation of the first and second power-generating units) was to be started and ended only with the approval of the PU chief. He learned about the forthcoming explosions only an hour before, and he asked S. Aganov to change the time. V. Dolgopolov's request was motivated by the fact that a short circuit could occur in the electric system as a result of the explosions, and this is a direct fire threat and, besides, it was necessary to take other measures also to ensure the safety of the AES. Sergey Khristoforovich did not accept the reasons of the PU chief. The intercession of the chairman of the governmental commission was required to change the start of explosive work to 1500 hours.

By 1600 hours work on the territory of the AES was stopped, and a team came in to evacuate people from dangerous spots. After a half hour passed, the chief of the command and control post rode out on an armored transporter to the area of the third and fourth reactors to confirm the absence of people.

Nobody was in the area, but a special crane was standing literally 15 meters from the wall where a marker indicated the first explosion. It had to be removed from the danger zone.

The explosions rang out with a delay of 29 minutes. But after them, 4 more hours were required so that the raised dust would be settled with the help of a fire engine.

Lines from a Journal. On 2 May the assigned task is to take measures to prevent the drainage of rain water into the Pripyat River and its tributaries. A decision is made to close the city waste water drainage system and to create a network of dams along the possible directions of water flow.

On the morning of 3 May, together with the commander of the engineer sapper batallion and the architect of the city of Chernobyl, we drove out on a reconnaissance. During the day, we identified places for erecting dams and their dimensions. Company commanders are assigned tasks on readying people and equipment to carry out work.

At the time of the reconnaissance we ascertained that vehicles are needed to bring in soil, and also earth excavating equipment. I phoned I. Plyushch, chairman of the oblispolkom in Kiev and asked him to provide the needed help. And it was given quickly. On 4 May, a column of KrAZ's (the same one they tried to send to another place) and on 5 May excavating machines were allocated on instructions of the Ukranian Ministry of Land Reclamation and Water Administration.

The dams were constructed taking into consideration the recommendations of geologists of the Ukraine who were very familiar with the Pripyat River basin in the area of Chernobyl. The structures were made like embankments, and they covered the movement of water at the top and from the front with a special film to prevent possible erosion. In addition, a trench was dug in front of each dam in the direction of the expected water flow to intercept it in order to weaken the water pressure. Peat, which has an ability to adsorb radionuclides, was poured into the trench. The entire system of measures on dam construction was implemented with high quality and in the shortest possible time. This made it possible to complete all planned work before it started to rain.

Much was done on the decontamination of residential and industrial buildings and their adjacent areas, and also roads, bridges and other structures. This segment of the work on eliminating the aftereffects of the accident without exaggeration can be called the most complicated and extensive. And here, together with other specialists, civil defense supervisers and fighters showed their real worth.

Work was started with an experiment on the decontamination of various buildings in the outskirts of Chernobyl, which was conducted on 29 April under the supervision of Lt Gen M. Maksimov, with the involvement of fire engines that were equipped with powerful pumps. Although the walls and roofs of the buildings contaminated with radionuclides were washed repeatedly with special decontamination solutions, there was no success on the first day in lowering the level of radiation background to a safe level. Moreover, it was ascertained that walls of buildings covered with ceramic tile virtually did not submit to "cleansing," and they

remained at an unreduced level of contamination. And it was possible to lower the level of contamination of roofs made of slate by no more than two or three times. In a word, considerable time was required afterwards to implement decontamination measures with adequate thoroughness and effectiveness. In fact even now, almost 2 years after the accident, this intense work is continuing.

Lessons and Conclusions

Work on the elimination of the aftereffects of an accident at an AES showed: in advanced planning of measures for an event of unforseen circumstances, one should not set hopes that the scale of an accident, if it occurs, will be minimal, and based on this conclusion conduct corresponding calculations for forces and resources. What is necessary is strict scientific and objective modeling and forecasting of the possible aftereffects which could arise in the process of one or another emergency situation. Here it is better, as they say, to play it safe rather than take extreme measures under unfavorable conditions.

Chernobyl convinced many that success in work to a significant degree depends on the centralized command and control of the activities of specialists and the close coordination of the efforts of ministries and departments and other organizations participating in the elimination of the aftereffects of an accident. The slightest interruptions, inability to organize and a lowering of exactingness lead to an unjustifiable loss of time and a disruption in the rhythm of operations and to complications in the situation. In this connection, I would like to remark on the well-coordinated activity of the officers of the command and control post, and at the same time also to make this inference—it is advisable to form and activate a PU more quickly than it was done. This can also be said about the organization of centralized supply of equipment, machinery and materials and the distribution of cargos.

In conclusion, I would like to note the following. My goal was not to elucidate profoundly and comprehensively the events which occurred at the Chernobyl AES. All of this still has to be done. I simply thought it my duty to share with the readers my impressions, observations and conclusions. The main conclusion, it is my conviction, is that now, when we have specific experience (although in many ways, bitter), it is necessary in view of this experience to do everything possible to prevent the emergence of a new danger, to increase attention to questions of restructuring the activity of civil defense, and to introduce serious changes in the system of educating the population and training nonmilitarized formations and supervisory staffs.

13052

Generals Shkadov, Konchits Discuss 'Restructuring of Military Schools'

18010460 Moscow KRASNAYA ZVEZDA in Russian 2 Aug 88 First Edition p 2

[Article by Arm Gen I.Shkadov, Col Gen V.Konchits, Director, Military Academy imeni M.V.Frunze: "Test of Creativity" under the "Restructuring of Military School" rubric; first paragraph is a boldface introduction]

[Text] **The 19th All-Union CPSU Conference called for a systematic and rapid implementation of reform in secondary school and higher education. This is no accident. Restructuring of the secondary and higher education in this country, including military schools, has not been proceeding as rapidly as the changes in our society and the renewal of all aspects of its life require. It is extremely important to experiment with methodology and not be afraid of breaking set stereotypes. This article describes an example of this approach, namely an experiment staged at the Military Academy imeni M.V.Frunze during the state examinations.**

What should an army commander be like? What should he be prepared for, what should he know and be able to do, this military academy graduate trained to assume a relatively high position? The answer to these questions has been given long ago. His academic training must include not only profound knowledge of fundamentals and solid practical skills to apply them in practice. Most important goals include molding the graduate's creative personality to endow it with new thinking and to make him able to take nonstandard decisions independently and carry them out in practice.

Naturally, it would be hopeless to try attaining this goal while remaining within the constrains of traditional teaching forms and methods. We need new solutions and new methods of working with people. A stable point of reference in the search for these solutions is an emphasis on individual training and education, on independent work by students and on making use of real-life conflict situations to find solutions to which would require both profound knowledge and an intense creative mental effort. This was the point of reference chosen for a restructuring that took place at the Military Academy imeni M.V.Frunze. It should be noted that this study principle engages the greatest attention of the students and helps intensify their work. This is an important factor, since only if a person's interest is engaged and he is involved in an interesting, inspiring work can he develop personal initiative, self-reliance, self-motivation and bold reasoning—all qualities of a true creative personality.

Of course, the academy's professors have not attained complete success. Experimentations and search for solutions can not consist of triumphs alone. What is important is that the students were not just passive bystanders but themselves participated in many new initiatives and experiments, and this fact inevitably affects the outlook of future commanders, chiefs of staff and field commanders.

In this respect, the current graduating class is unique. Their years at the Academy coincided with a period of its restructuring and of making the classes resemble real-life military activities closer than at any time in past decades. It is clear that their training, to a greater extent than that of their predecessors, took into account their future assignments. This allowed the Academy to stage another experiment, one that was a logical conclusion of a full course of study: to conduct state examinations in political science and tactical command training using interviews rather than the usual pre-determined set of questions and problems. The interviews covered a number of issues stemming primarily from key premises of the subject matter and, secondly, from the universe of duties most characteristic of the position that the graduate would be assigned.

More specifically, at the political science examination, each student was asked to discuss two questions (out of some 50 used at the examination) which required a philosophical, economic or theoretical assessment of a certain specific situation and to find an answer to them. The choice of the questions was determined by the type of a position which he would be assigned after graduation. In general, he was confronted with a specific problem and asked to discuss its relevance in today's environment using his acquired knowledge, to provide a theoretical explanation of it and to develop a program for solving it.

The examination thus consisted of a lively, involved discussion whereby members of the examination board asked the student to elaborate on this or that point of the argument, agreeing with some of his conclusions and rejecting others, so that the student was forced to defend his point of view and introduce new, more convincing arguments or admit that his position was untenable.

Members of the board graded the student's performance and from these grades the final grade was computed. They assessed not only the final answer but also the student's logical reasoning, his propagandist skills and the strength of his arguments.

The examination cast in a bolder relief the graduates' knowledge and their ability to apply it in real-life situations. At the same time, it highlighted weaknesses in their training. An analysis of the results would help make necessary corrections in the methodology of political studies instruction.

The examination in tactical command training had also been radically restructured. What was it like before? On the first day, the student drew a ticket with pre-determined questions that tested his theoretical knowledge; he also solved tactical questions for next days' mock

combat exercise. Next day, the student was tested on his practical skills in the field: how to organize a combat engagement and to command units and subunits in the course of combat. In general, this format made it possible to test the knowledge and skills of students. However, because of time constraints, a number of aspects related to combat management, troop security and interaction of various units were neglected. The crucial shortcoming was that students were faced with more or less incidental problems determined by the ticket each of them drew, using the example of some abstract military unit.

To a large extent, the new format helped eliminate these shortcomings. The first day also began with tactical problems. However, the problems' content had been changed to relate to the concrete units where students would be assigned. The number of tactical problems was large enough to avoid repeating the same ones to other students.

While solving tactical problems, the students acted as commanding officers deciding to accept the engagement, plotting it on the map (complete with necessary calculations and explanatory notes) and drafting written combat orders. This helped improve the practical quality of the examination, which was later reinforced by field exercises.

Theoretical knowledge was tested during a personal interview which took place on the second day of the examination. The students were asked three questions. Two were related to the theory of preparing for and waging combat and using various branches of the armed services and special service troops in combat, while the third question was, usually, to elaborate on some very important but insufficiently covered aspect of the tactical problem. The question also took into consideration the student's future assignment.

The content of the questions had also been changed considerably. This was accomplished primarily by excluding questions requiring mindless memorization of military statutes, exhortations or numerical data. In other words, the emphasis was on testing knowledge and understanding of key problems of modern warfare and military actions and main principles and rules of preparing for them and engaging in them. During the interview, the students were given a chance to express themselves without being interrupted. Only after each student finished did members of the examination board engaged him in a discussion on subjects that attracted their attention. Exceptions were made only when the students diverged from the subject, attempted to cover up the lack of knowledge by nonessential comments and digressions or made obvious errors. By asking additional or leading questions, board members encouraged the students to express their opinions freely and tested their of knowledge, skills in relating theoretical ideas to practical situations and ability to defend their point of view with consistent arguments.

On the third and final day of the examination, the students' practical combat organization skills were tested in the field. This type of examination began with a briefing: each student received an update on the situation used in the tactical problem that he himself had solved earlier. The briefing was conducted in person, over the telephone or on a diagram. He had to assess the situation and, taking the changes into account, reevaluate his earlier decision. This beginning showed how deeply the student understands of the nature of modern combined-arms combat and how quickly and correctly he assesses its dynamics as well as changes in the situation. Later, he reported the conclusions of his assessment of the situation, made revisions in his combat plan and solved a specific problem related to commanding units and subunits. Those questions also had a special purpose: they were meant to test the students' skills in conducting reconnaissance, giving or modifying combat orders to various components of the battle order, ensuring coordinated action, providing battle security and firing on the enemy.

Thus, all three stages of the examination contained recurring questions which helped evaluate, thoroughly and in our opinion objectively, the students' ability to engage in a specific type of military action in view of his future assignment.

Members of the state examination board feel that the new examination format has proven useful. It meets the requirements of military school restructuring to a greater degree. It allows not only to evaluate the graduates' knowledge more objectively—which is important in and of itself—but also shows what kind of individual characteristics, creativity and self-reliance they display in combat situations.

We do not claim that the methodology used in the state examinations is a finished product. It needs to be developed and refined. One thing is clear, however: it is promising. Consequently, these methods should be actively implemented not only during final examinations but in the education process itself. It should be noted, however, that it places greater demands on teachers. They must broaden their knowledge of course material and learn the case study instruction method. The situation demands it.

12892

Use of Computers in Military Schools

18010255a Moscow KOMMUNIST VOORUZHENNYKH SIL in Russian No 11, Jun 88 pp 54-57

[Article by Capt 3d Rank L. Mrochko and Capt 3d Rank A. Pirogov: "The Computer in the School Department"]

[Text] Hardly anyone needs to be told today that schools can no longer do without computers. Computers are being actively introduced into the training process in

7qmany military academies and schools. This effort is also proceeding in the departments of social sciences. Take for example the Military-Political Academy imeni V. I. Lenin. Computers are being introduced here to teach political economics, Marxist-Leninist philosophy and party-political work. Students are able to study a number of subjects with the assistance of a computer. Development of automated courses in social sciences is already on the agenda. And from our point of view this is a task that is without our means. For example the Military-Political Academy imeni V. I. Lenin is having some success in automating a course on scientific communism.

But how are things going in this area in the military schools? We were given the opportunity to visit several VUZes. We found for example that the Higher Naval Radio-Electronics School imeni A. S. Popov has a teaching program for a CPSU history course. The program is substantial, and as experience has shown, it promotes deeper study of the social sciences. The Riga Higher Military-Political School imeni Marshal of the Soviet Union S. S. Biryuzov and the Higher Naval School imeni M. V. Frunze are using automated teaching systems in some subjects of Marxist- Leninist philosophy, scientific communism, and military pedagogics and psychology. According to our observations much has been done to introduce computers into training in the departments of party-political work, Marxist-Leninist philosophy, and military pedagogics and psychology of the Kiev Higher Naval Political School.

Experience persuasively demonstrates that there are a lot of advantages to using computers to teach the social sciences. Computers make a high degree of individualization of training possible. The independent work of students and cadets becomes more effective. A computer provides direct feedback between students and the instructor. It can test students and cadets in all subjects. Their answers are recorded in the computer memory. When requested to do so by the instructor, a printer (a rotaprint system) provides time-and-motion study information and information on lesson results. When necessary he can analyze how deeply a lecture has been assimilated and what questions caused difficulty to which students, and make the corresponding corrections in his lecture preparations and in the lesson schedule.

In a word, the merits of computer equipment are abundant. But unfortunately educators have yet to fully understand all of them. This is why they often are unable to capitalize on all of the training possibilities of computers effectively enough. Let us explain what we mean.

As we know, computer teaching has already been going on over 20 years, chiefly by trial and error, without adequate utilization of the accomplishments of modern teaching theory. Why? The fact is that a scientific model of a training process utilizing a computer has not yet been developed. The number of opinions on how to use computers to study the social sciences is as large as the number of VUZes. Today the number of teaching programs in various subjects is beyond reckoning. In the opinion of specialists most of them cannot even be said to be satisfactory. First of all many of the existing teaching programs are not linked to the possibilities of traditional and programmed learning. Analysis has shown that they only answer the question "What do we teach?" and ignore the question "How do we teach?" Many existing programs are oriented exclusively on "tactical" study goals: on raising the effectiveness of teaching certain subjects, on better assimilation of some subjects, on "coaching" in regard to certain problems, and so on.

We believe that there should be a "strategic" goal at the basis of computerizing training in departments of social sciences: activating cognitive activity and developing the cognitive capabilities of students and cadets in the conditions created by wide use of computers in training and education. A theoretical model of computerized instruction in the social sciences can be developed only by a scientific collective that brings together instructors, educators, psychologists and specialists in computer technology and programming. The reason for this is that the task of automating training in the higher military school goes beyond just forming an "assemblage" of required habits and skills in graduating students. It is a far-reaching social and general cultural task.

Creation of an experimental laboratory could help to hasten its completion in the departments of social sciences of military academies and schools. This problem has been ripe for solution for a long time. Such a laboratory could become a center directing all of the work of utilizing computer technology in the study of social disciplines: It could develop and form a bank of general-purpose packages of applications programs and procedures for different subjects, available for use by all military educational institutions, and it could generalize and disseminate progressive experience in computerizing the teaching process.

We think that the Military-Political Academy imeni V. I. Lenin may be the prime candidate for such a center. It possesses considerable scientific potential, and a material-technical base sufficient for experimental research. All the more so because the programs that the academy has developed are already being used by many academies and schools. And requests for their programs continue to flow in.

"Yes, the academy does satisfy the requests of the departments of social sciences of military educational institutions. It sends them copies of its training programs. We share everything we have," said Lieutenant General of Aviation V. Serebryannikov, the academy's deputy chief for training and scientific work. "We do not claim that our programs are the best. They may be even better in other military VUZes. We are exploring the possibilities, and we are encountering many problems. Things do not always work out for us. We are prepared to

learn from the experience of others, and share our own. But one thing is obvious: The issue of creating an experimental laboratory requires resolution. And the sooner, the better."

The idea of creating such a center is supported in the military educational institutions we visited. It is supported especially enthusiastically by those carrying the responsibility today for automating training in the departments of social sciences. They are compelled to develop their programs on their own time. Why? Specialists calculated that the writer of a program must work 100 hours to support just 1 hour of work by a computer user (student or cadet), and as a rule, this time is not accounted for in the instructor's overall load.

Here is a specific fact. Captain 1st Rank M. Aleksandrov, a senior instructor at the Higher Naval School of Radio-Electronics imeni A. S. Popov, took around 700 hours to write a program and translate it into "computer language." And no one helped him out with his teaching load.

Is there a solution to this problem? We made inquiries concerning it in the Main Directorate for VUZes of the USSR Ministry of Defense.

"We know of the problem, and we are looking for ways to solve it," said Officer G. Kazantsev, a worker of this directorate. "The appropriate guidelines foresee development of teaching materials for computers. Chiefs of military educational institutions and department chairmen are permitted to include this type of work when determining the overall load carried by an instructor. And then the department has the responsibility for adjusting the workload. This is the only way things can be done at present. I think that the situation will change in the near future."

Changes are doubtlessly needed. They may possibly affect the structure of the departments of social sciences as well; experts in training methods specializing in writing teaching programs for automated training courses will appear among the instructors. There can be no doubt that the teaching programs will have to be brought into correspondence with the new procedures for teaching social sciences with computers.

There is one other side of the problem. Computerization of the teaching of social sciences presupposes a good material-technical base—dependable, up-to-date computers. We need a wide computer network that could support a system of terminal-equipped classrooms created in individual departments or in a group of kindred departments of social sciences. It is precisely this approach that will ensure their independence in the military educational institution and facilitate lesson scheduling. Unfortunately this is still just a dream in the military VUZes. For example the Higher Naval School of Radio- Electronics imeni A. S. Popov (the navy's main military educational institution training specialists in computer technology) has only two terminal-equipped classrooms for the moment. This cannot fully satisfy the needs of even the departments of military specialized disciplines.

Some progress has been made in the Kiev Higher Naval Political School, which recently received several computers. Captain 2d Rank V. Ivanov, the school's senior instructor, wrote a program for computerized study of the problems of organizing socialist competition in the units and of the guidelines of party-political work. Captain 3d Rank G. Perepelitsa wrote a program for one subject in Marxist-Leninist philosophy. A teaching program on the procedures for evaluating public speaking has already been written for the department of military pedagogics and psychology. Its author is Cadet V. Teslenko. In the opinion of the instructors the cadets are showing enormous interest in computer technology, but the school is not yet able to satisfy this interest. Equipment is clearly lacking.

"We prepared a room for a computer, but then we learned that it will be another year before we get it," Captain 1st Rank A. Stavrov, officer in charge of introduction of computers into the training process, said bitterly. "We do not have any literature on operating and servicing a computer, or on program writing procedures. But that's only half the problem. There is something else that troubles us. We were given computers that are not used on ships. I can't understand the position being taken by the navy's political directorate: Ours is the only higher naval school that has not been provided with the needed computers. Shouldn't the political workers we train for the fleet master the skills of working with computers? And strange as it may seem, when it comes to supply issues, the corresponding supply agencies ignore us. Consequently we will have to do our teaching with the equipment that is available to us, and after they graduate, the lieutenants will have to relearn everything aboard ship."

We turned to Captain 2d Rank L. Kovalkin for an explanation. His responsibilities include solving problems associated with computerizing the training process in naval schools. We learned that the higher naval political school was making out a lot better than most: It was given what the norms require. Others—command schools for example—are still waiting for their allotment. We also found that the adopted norms are clearly inconsistent with the training needs of cadets and students.

We discussed the content of this conversation with Colonel G. Kazantsev. He told us that new norms for supplying computers to military educational institutions, improved ones, have already been written. The growing demand for and higher interest in computerizing the teaching process were accounted for.

The officer also stated one reason why many schools, and particularly the combined-arms command schools, have not received their full allotment of computers. The entire

problem lies with disproportions in the distribution of computer equipment. Despite the existence of a high-level directive requiring that computers must be supplied to VUZes on priority, some staffs ignore this requirement. This is true for example of the main headquarters of the ground troops, which favors the troops when it comes to distributing computer equipment. But does anyone at headquarters consider that neglecting the interests of military VUZes is having an unfavorable effect on the training level of young officers?

We think that general interests must be the basis for our decisions, that we need to consider the future.

Automating the training process is not an easy task. It can be carried out through the joint efforts of all interested organs of control. In this aspect it would be pertinent to cite the experience of the department of VUZ personnel and political staff training of the Main Political Directorate of the Soviet Army and Navy. Practically all higher military-political schools have received several outfits of computers. Most have created slots for computer maintenance personnel and, and they have organized computer centers. There are plans for conducting programmer conferences.

"We know that it is extremely difficult to organize computer training with the equipment presently available," said Colonel P. Abramov. "We are doing everything we can to satisfy the needs of the schools. We cannot wait around for better times, we need to start looking right now for ways to raise the computer competency of instructors who will have to work with automated teaching systems in the future. We need to learn to surmount the so-called 'psychological barrier' of computerization."

Yes, computers will not enter the process of teaching the social sciences on their own. And we cannot take the position that someone will get around to supplying us with computer equipment, and that someone will develop the software for us. It is true that we do not have enough computers yet, and that there are difficulties in supplying good programs. But we can start working on these problems right now. And they are being solved successfully wherever people display initiative, and try to find the possibilities for raising the computer competency of instructors.

A few words on the role of social science instructors in automation. Experience shows that a very significant proportion of them are still not making an effort to master the basics of computer competency. The reasons for this are varied. One of them is that many are oriented on traditional forms of training. The methods are simple, they are within everyone's means, and the adopted grading criteria make the training results comprehensible and easily assessible. We have become accustomed to them, and many have no wish to restructure their familiar ways of doing things.

But restructuring is a necessity. Computers are forcing their way into our daily life. There will come a day when they will become commonplace in the departments of social sciences. And instructors in the social sciences must be ready for that day.

11004

U.K. Said to Violate U.N. Arms Embargo Against S. Africa

18010429 Moscow KRASNAYA ZVEZDA in Russian First Edition 7 Jul 88 p 3

[Article by V. Golubev: "Protectors: On the British Military and Economic Aid to the Republic of South Africa"]

[Text] On this day, as always, a businesslike animation prevailed at the moorings of Port Elizabeth. The machinery, windlasses and cranes creaked and rumbled in their work and loaders scurried about. Nothing unusual. Perhaps only the columns of heavy trucks at the unloading site for a Canadian ship attracted attention. And not without reason: it was later learned what only the South African officers supervising the work knew. The latest shipment of English weapons secretly supplied to Pretoria by the Canadian subsidiary of the British company Trafalgar House had arrived in South Africa.

Unfortunately, this was not a unique case but only one of England's many violations of the mandatory UN embargo on deliveries of arms to South Africa passed back in 1977. In 1986, for example, it was publicized that a Dutch ship had transferred 30 containers of mine throwers and artillery shells from England to South Africa, even though the ship's log indicated a different point of destination. Analogous events also took place in 1987: using roundabout ways, London regularly supplied weapons to Pretoria. Still another "deal" became known in March 1988: 20 tons of crude uranium from South Africa came to England by way of the FRG. The British enriched it and resold it, obtaining a profit of 20 million pounds sterling. By the way, we remind you that Namibian uranium is utilized both as fuel in the reactors of British submarines and as a deadly filling for the warheads of "Trident" missiles.

It should be noted that precisely Great Britain is among the sources of the rearming of the South African Army. Back in 1955, London entered into a formal military alliance with Pretoria for a period of 20 years. It then transformed its military industry, composed at the beginning of the 1960s of a small cartridge factory and a shop for the repair of artillery equipment, into a powerful industrial sector, thanks to huge investments in the economy and deliveries of equipment, technology and arms. With the help, for example, of the English chemical concern Imperial Chemical Industries, the first large plants for the production of ammunition were built in South Africa and they subsequently organized the production of napalm and tear gas. On the basis of South African subsidiaries of British Steel, they established the South African corporation ISKOR, which manufactures armor plate using Israeli technology.

The brochure "Analysis of the Action of Great Britain Against South Africa" published by the English Movement Against Apartheid states, in particular, that England has not taken any steps to legislate the mandatory UN embargo. In each individual case, London itself decides which goods fall under this ban and which do not. At the same time, there is no provision made for any legislative responsibility for a violation of the embargo. It is not surprising that in 1984 the cabinet in London sanctioned the sale to Pretoria of mobile radar installations of the firm Plessy and stationary radar stations of the firm Marconi. A group of South African specialists was trained for work on these installations in England.

In 1986, the English firm Redmon [illegible] supplied South Africa components for the production of several types of missiles and projectiles. It has been calculated that in 1986 as many as 650 British military firms represented in South Africa carried on a lively trade in arms and military technology in that country. England is supplying optical equipment as well as computers for the needs of the South African Air Force and police. Some British firms are unashamedly smuggling weapons and no serious measures are being taken against them in the event of a court examination.

England is also involved in the rearming of the South African armored forces: the South African "Elephant" is the British tank "Centurion" modernized with Israeli help, the South African combat aircraft "Impala" built under Italian license are being equipped with engines of the English Rolls Royce corporation, and the "Bakanir" aircraft of the South African Air Force of British production are provided with spare parts from that same England.

England was also caught cooperating in espionage with South Africa. In the words of the newspaper "Independent," London, after photographing targets in "frontline" states with the help of satellites, then transfers the reconnaissance data to Pretoria. It also presents facts indicating that representatives of the British Navy also exchange secret reconnaissance information with their South African colleagues. The reconnaissance agencies of the two countries established rather close cooperation in organizing the persecution of representatives of South Africa's African National Congress. Through May 1988, about 200 ANC activists were killed beyond the borders of South Africa alone. In reporting on the infamous murder in London of D. September, the London "Daily Mail" wrote: "It is possible that a special commando of South African special services is now in Great Britain preparing to murder additional representatives of ANC representatives." The story of a certain N. Niemoller, who presented himself in the British capital as a South African businessman, is instructive. He organized contacts with former warriors from special subunits, having come to an agreement on their participation in the organization of operations against the ANC. All of this took place with the obvious approval of the British intelligence service MI-5.

The foreign headquarters of the South African National Intelligence Service (NIC) is located in London. It is headed by D. Stoberg, who, the "Daily Mail" reports,

planned the actions against South African opponents of apartheid with the help of militants from the "Zet Squadrons" formed by South African intelligence. The Englishman S. Baret, whom it recruited, was caught red-handed last year in Botswana at the time of an unsuccessful attempt on the life of the white opponent of apartheid R. Watson. S. Baret indicated under interrogation that he is also working for the English counterintelligence agency MI-6.

As was noted, the rapid development of the South African military machine could not occur without the help of its "generous investor"—British capital. London experts, for example, declared in 1986: "South Africa is still part of the Western world, however repulsive it may be. It is closely linked with the financial and trade interests of the West." Read—of Great Britain as well, whose firms, in the words of the Indian newspaper "Patriot," have contacts with South African companies "reflecting their longstanding historical relations." It is enough to say that English corporations account for almost half of all capital investments in South Africa, which in monetary terms amount to about $12 billion.

Pretoria's racist regime is also receiving help in surviving through the combining of British and South African capital and the introduction of South African business in English markets. Thus, Charter Consolidated has solid packages of shares in such major British companies as Johnson Mattei and Mattei-Rustenburg Refiners. Barlow Rand, the third largest corporation in South Africa controls the English metallurgical company Smith Drews Metals through its British subsidiary. Rand Selection, Goldfields Property, Cape Gate, P.G. Industries and others have solid capital investments in other English companies. Besides the rather well-known Anglo-American, more than 50 South African gold and coal mining companies are represented in the London stock market.

The "good souls" from London are also saving South Africa from oil hunger. Just in the last 4 years, the English-Dutch oil firm Royal Dutch Shell sent at least 35 tankers with millions of tons of fuel. Frequently, for example, oil from Brunei is sent to South Africa by Shell subsidiaries through Japanese and Swiss intermediaries. The company is also participating in the development of the South African gas field in the Mosselbaai region with its subsequent refinement into liquid fuel. It was not without reason that a Shell representative responded sharply: "We want to strengthen ourselves in South Africa. To leave from there means to abandon a very lucrative market."

These words reveal the real reasons behind the British military and economic aid to the apartheid regime. England's opposition to comprehensive sanctions against South Africa only confirmed the conclusion of the Nigerian journal "Zusweek" [Zusuik?] that London "remains the most faithful ally of apartheid."

9746

E. Pacific Region: From Arms Race to Universal Security

18010414 Moscow POLITICHESKOYE SAMOOBRAZOVANIYE in Russian
No 7, Jul 88 (signed to press 12 Apr 88) pp 93-100

[Article by Yu. Lebedev under rubric "Realities of the Contemporary World": "The Pacific Asiatic Region: From Arms Race to Universal Security"]

[Text] The Pacific Asiatic region (ATR) is a vast area of the planet, the cradle of ancient civilizations of yesterday and a concentration of almost two-thirds of humanity today. This part of the globe, washed by the waters of the Pacific and Indian oceans, stretches out from the Urals and the Middle East to the western shores of two Americas in the east and the silent Antarctic to the south. The political interests of such large states as the USSR, the U.S., the PRC, Japan, India and Canada come into contact and are interwoven in the ATR. Indonesia, the Philippines, Vietnam, KNDR [Korean People's Democratic Republic], South Korea, Thailand, Pakistan, Australia, Bangladesh, Afghanistan, Burma, New Zealand and others are located here. The share of the region in the world economy grows with each year. It generates more than half of the world's industrial production and almost one-third of the world's trade turnover.

Taking the aforementioned into account, the U.S. administration is trying to find a more effective means of protecting the notorious American "vital interests" in this region. Rich sources of strategic raw materials, cheap labor, fast turnover of investment capital and a high rate of profit engender a special interest in the ATR among many American political figures and economists. In 1986 alone the direct capital investments of U.S. monopolies in this region of the globe reached 33 billion dollars, and the volume of trade turnover constituted 187 billion dollars, that is, 35 percent more than with western Europe. According to the calculations of specialists, by the 1990's the ATR will surpass western Europe in GNP and will have a significant influence on international economic relations and on power arrangements in the world as a whole.

THE ATR—A ZONE OF POLITICO-MILITARY INSTABILITY AND CONFRONTATION

Asia and the area of the Pacific Ocean is a colossal socio-political expanse with a tremendous number of problems, both those that were inherited from the colonial past and those that arise from the contradictions of contemporary social development; problems that are very special, having a specific character, and problems that are similar to those that arise in many other areas of the world. It is here that there continually emerge large and small hotbeds of dangerous tension, clashes and "small wars" that affect the international situation as a whole. It is enough to say that in the second half of the 20th century of the more than 250 military conflicts that

poisoned the world's atmosphere 240 broke out in countries of Asia and the Pacific Ocean basin. It was here that a nuclear tragedy took place. This is the alarming context in which each state located in this region formulates its line in international relations.

There is still a virtual absence in the ATR not only of a mechanism for international inspection over militarization but even any kind of an effective system of negotiations concerning its creation.

In the development of one or another specific aspect of ensuring security in the region, it is necessary to take into account the position of a large number of parties. And calculation of the military balance is extremely difficult. In addition, a significant geographic and political potential exists in the region for changes that frequently give rise to conflicts, whose level varies from potential to "hot," and whose scale varies from internal to regional.

In many countries of the region, serious unresolved problems of a social, economic, national, religious and other makeup continue to exist; violent methods of usurping and maintaining authority predominate, and sometimes hotbeds of armed opposition to the government are preserved for years, which from time to time leads to very dramatic events. This kind of turn in internal political development, as is known, creates a favorable soil for interstate conflicts. In short, the ways and methods of ensuring regional security in Asia cannot be the same as in Europe.

Owing to the cited reasons, it can be asserted that the process of ensuring security in the Pacific Asiatic region in all liklihood will be more difficult than on the European continent where, by the way, far from all basic problems have been resolved. It is not accidental that some say that there are so many conflict situations of a subregional level in the ATR that it will not be possible in the forseeable future to work up a document like the Final Act on Security and Cooperation in Europe. Others refer to the fact that in Asia many national states are just being formed and that therefore political regimes in a number of countries, lacking self-confidence, are seeking the support of powerful states located on other continents.

Let us assume this to be true. But this, in turn, attaches even greater urgency and importance to the task of ensuring security in the ATR, especially considering that in recent years its role in international relations has increased significantly and that the state of affairs emerging here has an ever more tangible effect on the global politico-military situation. **Any highly explosive situation in the region can easily expand beyond the limits of a local conflict and create serious problems for the maintenance of universal peace.**

The Soviet Union, which has its own very extensive land borders in Asia and which is one of the most important coastal states of the Pacific Ocean (more than 75 percent of 22.4 million kilometers of territory is located in Asia) is extremely concerned that the Pacific Asiatic region not become a zone of tension and an arena for military confrontation. Therefore, **the policy of the USSR is directed at an improvement of relations with all countries of the ATR, a relaxation of tensions and a search for a peaceful solution to controversial problems. The Soviet Union formulates its approach to complex issues and intricate conflicts in the region in the context of ideas for the creation of a comprehensive system of international security proposed at the 27th CPSU Congress.**

Other objectives in the ATR **are being pursued by imperialist forces, most of all by the United States, which is attempting to create an "eastern front" against socialism. The policy of the U.S. is directed at the further deformation of the regional correlation of forces, intensification of military, including nuclear, confrontation, the aggravation of conflict situations, and the conduct of an obstructionist line on questions of their peaceful settlement.** According to the conception of the present administration of the U.S., their political and economic interests, security and a stable situation in the region, and also the trust of their allies in the U.S., must rely on military power, whose embodiment is the presence in the ATR of American armed forces that are now deployed practically along the entire perimeter of the Pacific Ocean, including in the immediate proximity of USSR borders—at so-called "forward lines." The establishment here of powerful naval and air forces forms a system of U.S. military bases in the Pacific and Indian oceans.

The second largest grouping numerically of American armed forces outside the country (after western Europe) is deployed in the Pacific Asiatic region. Two of six unified commands of the U.S. operate in this region—the Pacific Command (PACOM) and the Central Command (CENTCOM). The first (with headquarters on the Hawaiian Islands) was created in 1947. Its sphere of responsibility includes the Pacific Ocean and territories situated along its shores, i.e., approximately half of the surface of the globe. PACOM includes two of four U.S. fleets—the 7th Fleet, which is deployed mainly in the northwestern part of the Pacific Ocean, and the 3d Fleet (based on the western shore of the country), which is intended for conducting operations in the eastern part of the Pacific Ocean. CENTCOM was organized in 1983 and is intended mainly for the conduct of operations in the area of the Indian Ocean and the Middle East. The CENTCOM zone encompasses 19 Asiatic, Middle Eastern and African states. The U.S. nuclear arsenal in the ATR numbers thousands of different combat warheads. Hundreds of military installations, including command and control centers for nuclear weapons systems, are deployed here.

MILITARIZATION OF THE ATR

The process of militarization of the Pacific Asiatic region is being whipped up by the neoglobalist ambitions of Washington which is attempting to create a second line

of military confrontation here to supplement the one in Europe. This is indicated in particular by the USIA release of the book "U.S. Military Outposts in the Pacific Ocean." The book observes that the zone of operations of the U.S. command in the area of the Pacific and Indian oceans includes territory from the Pacific shores of North and South America to the eastern coast of Africa, and from the Arctic to the Antarctic. Almost 190 combat ships (including nuclear-powered ballistic missile submarines—PLARB [SSBN], and aircraft carriers), about 280 tanks and 560 field artillery pieces (including more than 260 nuclear-capable pieces), more than 1,200 combat aircraft (of which almost half are nuclear weapons carriers), and four divisions (two infantry and two marine) are deployed in the area.

Exaggerating the myth about the "Soviet military threat" and in justification of the need to defend "vital interests," **the U.S. is continuing to build up the Pacific Asiatic aggressive force. It is strengthening the military potential of partners, and it is developing an infrastructure for the deployment of troops in forward areas for the purpose of achieving an advantageous correlation of forces.** Washington clearly is nurturing plans to create a broad politico-military coalition of states in the region under its control and to transform it into a distinctive far eastern equivalent to NATO. The U.S. bloc strategy in the ATR is being built both on the basis of bilateral agreements and on the basis of existing military alliances and exclusive regional force groupings. Moreover, Washington is paying particular attention to the creation of a "Washington-Tokyo-Seoul" triple alliance.

U.S. cooperation with Japan is being developed on a legal and treaty basis, whose most important component is the "Treaty on Mutual Cooperation and Security" signed in 1960. According to it, the parties pledged jointly to repel aggression in the event of an armed attack on Japan, including an attack on those American installations which are deployed on its territory. The treaty virtually transformed Japan into a bridgehead for the armed forces of the U.S. in the Far East and into a participant in any armed conflicts which could be unleashed by the transoceanic ally in this region.

The development of plans for combined operations and rehearsing them in the course of combined operational training of the armed forces and the coordination of programs of military construction are being implemented on the basis of the document "Basic Principles of Japanese-American Cooperation in the Area of Defense" signed in 1978. An important feature of U.S. and Japanese military cooperation is the move of the parties to the development of specific plans for the cooperation of the armed forces at all echelons of command and control—strategic, operational and tactical.

The U.S. administration is undertaking considerable efforts to broaden and consolidate the American military presence on the Japanese islands. According to information from the so-called "White Book on Questions of Defense," which lays out the official views of the Japanese leadership on questions of policy in the military sphere, there are now almost 50,000 American servicemen in Japan. This is the largest grouping of U.S. forces of those deployed in Asiatic states.

The U.S. armed forces utilize almost 120 military installations and bases in Japan, including about 10 airfields, up to 20 training ranges, and more than 25 weapons and military equipment depots, including nuclear weapons repositories. The largest military naval bases are Yokosuku and Sasebo. They became a permanent base for surface ships and submarines of the 7th Fleet, also including those that have nuclear weapons on board. The newspaper AKAKHATA gave the name "nuclear spear" to one of the largest U.S. Air Force airfields at Misawa, which is situated in the north of the Japanese Honshu Island. Not long ago two squadrons of F-16 fighter-bombers of the USAF were deployed to this base. As is known, these aircraft are capable of carrying nuclear weapons on board. As a result, Misawa became practically the most important installation in the nuclear strategy of the U.S. in the Far East.

American submarine observation posts and hydroacoustic reconnaissance systems operate actively in Japan (in Shimokita and on the islands of Iwo Jima and Okinawa) in support of U.S. submarine operations. Electronic reconnaissance posts are deployed on the territory of the country, and a chain of radionavigation stations of the "Omega" system has been set up to assist SSBN, surface ship and aircraft position-finding. It is planned to set up an over-the-horizon reconnaissance radar with an operational range of 3,000 km on one of the islands of the Ryukyu archipelago.

American strategy in the ATR today is inconceivable without the active assistance and direct participation of Japan. The so-called self-defense forces, which in their tasks, structure and character of armaments virtually have been transformed today into a powerful modern cadre army, already number almost 270,000 servicemen. It should also be emphasized that almost half of the personnel are officers and noncommissioned officers. This is an important fact, because it indicates the great mobilization capabilities of Japan: in a short period, according to Western press reports, Japan can place up to 1.5 million persons under arms. At the present time the Japanese Army has more than 400 combat aircraft, about 1,000 tanks and more than 160 combat ships in its inventory. In aggregate combat power, the self-defense forces occupy sixth place in the capitalist world and first place in Asia. They are equal in the number of divisions to the FRG bundeswehr, and they are slightly smaller than Great Britain in the size of ground forces. Japan became the fifth official participant in the American SDI program which, undoubtedly, will substantially increase its role in the nuclear strategy of Washington and make it an accomplice in the realization of American plans to transform space into an arms race arena.

Familiarization with the program for the militaristic preparation of Japan, expected in the period 1986-1989, on behalf of which the "one percent ceiling" on military expenditures established in 1976 was broken, indicates that the administration has laid stress on a sharp buildup of the naval and air forces of the country. Completion of this program will enable the Japanese armed forces, in the opinion of foreign specialists, to begin the fulfillment of responsibilitys given by Washington in 1981 to take a 1,000-mile zone from the shores of the Japnese archipelago under its own military control.

An odious decision was made at a joint meeting in 1982 of the Japanese-American consultative committee on security questions: to begin the development of plans for combined combat operations of the armed forces of Japan and the U.S. in the event that an emergency situation arises in the Far East.

The role of South Korea is growing in the strategic military balance of forces in the region. Its territory today is one of the important bridgeheads of the armed forces of the U.S. The United States has 40 large bases and military installations in South Korea that are deployed at Seoul, Pusan, Osan, Taegu and Kwangju, and in camps along the demilitarized zone and other areas. There are 40,000 American servicemen in the U.S. armed forces in that country. In addition, American forces have about 130 tanks, more than 120 field artillery pieces (including about 80 nuclear-capable 155-mm and 203.2-mm howitzers) and mortars, and 110 combat aircraft (more than 80 of these are nuclear weapons carriers). Ships of the 7th Fleet with nuclear weapons on board regularly stop in at the South Korean ports of Pusan and Chinkhe.

Even during the Korean war leading U.S. political and military figures considered the possibility of employing weapons of mass destruction against the KNDR [Democratic People's Republic of Korea] and the PRC. Plans for a nuclear war on the Korean peninsula exist even now. This is not the first year that the delivery of nuclear strikes on the territory of the KNDR was practiced in the course of wide-scale American-Korean maneuvers. To supplement the already existing U.S. nuclear arsenal in South Korea, American military command authorities are studying the possibility of deploying their own ground-based cruise missiles in the southern part of the country. Deployment of the tactical operational "Lance" missile in South Korea has been started.

At the present time, the South Korean Army has more than 20 divisions that are maintained at a high level of combat readiness. The rehearsal of practical cooperation of groupings of U.S. and South Korean armed forces is implemented at combined exercises, the largest of which are the strategic operational maneuvers of the "Team Spirit" type. For example, in 1987 more 250,000 persons, 1,200 aircraft and helicopters and about 70 combat ships and auxiliary ships took part in them.

The Association of Southeast Asian States (ASEAN), formed in 1967, is assigned a special role in the Pacific Asiatic policy of the U.S. At its inception this organization proclaimed its principal aim to be cooperation in the economic and cultural development of its members. The advantageous strategic position of the countries of ASEAN in the area of the straits, where the waters of the Pacific and Indian oceans merge, turned them into objects for wooing by American neoglobalists. Their cherished goal is to endow the countries of one of the main subregions of the ATR with the attributes of a military alliance.

The system of involving the ASEAN countries in military preparations is directed at ensuring reliable control in the future over Southeast Asia (SEA) as a whole and to strengthen the U.S. strategic military position there. Within the framework of military cooperation, the volume of American deliveries of armaments to countries of the subregion doubled just for the period 1981-1985, reaching $3 billion, and by 1990 it will increase to $6 billion. The spheres of military cooperation are training of specialists, providing assistance in improving elements of the infrastructure, coordinating the activity of intelligence organs, and holding regular meetings of representatives of the political and military leadership, and others.

U.S. relations with ASEAN countries are secured in official documents. Thus, the Philippines are tied to the U.S. in a number of treaties and agreements (concerning military bases—1947, concerning mutual defense—1951, concerning mutual assistance—1953, and others). A large contingent of American troops (more than 15,000 persons) and more than 30 military bases are deployed on the territory of this country. In accordance with the "Plan for Combined Defense," the Philippines are committed in the event of necessity to grant American command authorities virtually unlimited rights for expanding their military potential on Philippine territory. In response to assurances from Washington concerning an increase in economic and military aid in 1984-1989, the Philippine government agreed to extend the period of lease of their military bases—the fulcrum of nuclear "neoglobalism" of the U.S. in Asia. The question mostly concerns the Subik Bay naval base and Clark Field air base—the largest outside the U.S.

The political and military cooperation of the U.S. and Thailand is expanding, and support for the Khmer counterrevolutionaries in Kampuchea is being carried out from territory in Thailand. The partnership with Thailand is based on previously arrived at agreements about economic, technical and military cooperation. Since 1979 the effect of the bilateral understanding has been practically renewed, according to which the U.S. Air Force, conducting flights in the areas of the Pacific and Indian oceans, is permitted to make landings at Utapao, Takli and Donmuong air bases, and also calls of U.S. combat ships are permitted at the Satthip naval base. In accordance with a "Memorandum of Mutual Understanding," signed in 1935, and an agreement of

1987, provision is made for the construction and deployment of American weapons, military equipment and technical material systems depots on the territory of Thailand.

Indonesia is closely tied to the United States in the military sphere. At the present time, the reequipping of the Indonesian armed forces and modernization of the infrastructure is being implemented with the assistance of Americans. The United States received permission for U.S. Navy ships to enter the internal waters of Indonesia (without advance notification) when moving through the straits of Lombok, Makassar and Sunda, and also permission for flights of strategic aviation through the air space of the country and the intermediate landings of military aircraft at the Madiun and Jakarta airfields. American combat equipment constitutes the basis of Indonesian armaments. The U.S. also provides assistance in the training of military personnel.

Malaysia is also not left without attention. It is a dynamic and multinational country. The U.S. is interested here first of all in the use of the Lumut naval base and the Kuantan air base in their own interests.

The military cooperation of the United States with Singapore is based on the broadening of production of weapons and military equipment. This process encompasses all of the ASEAN countries, but it is developing most intensively in Singapore, whose military products are exported to many states of the region and even beyond its borders. The air bases of the country are used by the Americans for intermediate landings of their aircraft, and the ships regularly call at Singapore for repairs and resupply. During combined maneuvers, combat tasks for the defense of the straits zone are rehearsed.

The U.S. views the important strategic position held by the islands of Micronesia as its own rear area. In recent years, new links have appeared in the chain of bases here created by the Pentagon. Nuclear and chemical weapons depots and a base for the training of "Green Berets" have been deployed on Babeltuan Island. Munitions depots have also been set up and long range communications stations have been deployed on the Marshall Islands. The construction of air force and naval bases is being conducted on the islands of Taiwan and Saipan. Facilities are being erected on Kwajalein that are included in the SDI program.

The U.S. is also building up its military presence in the northern part of the Pacific Ocean. A decision has already been made to establish a large joint air force and naval base on the island of Adak (Aleutian Islands).

The United States has entangled Australia and New Zealand with politico-military responsibilities. As far back as 1951, they were drawn into the ANZUS bloc created under the aegis of the U.S.

The Americans utilize the military bases on Australian territory within the framework of their own nuclear strategy. Their nuclear weapons-carrying B-52 bombers have the right to land at Australian airfields (in the northern part of the country), when they conduct flights from the base on the island of Guam to the base at Diego Garcia in the Indian Ocean. The U.S. leases territory in the center of Australia for the Pine Gap base. The Pentagon has deployed a military technical station there, which, via artificial Earth satellites, supports the communications of American submarines and surface ships located in the Pacific and Indian oceans, with a command and control center, and it collects information transmitted by reconnaissance satellites.

At the present time, negotiations are being held on granting U.S. armed forces new bases in the central and western part of the Australian state of New South Wales in the area of the cities of Orange and Bathurst. Simultaneously, plans are being worked on for the transfer of the American naval base from Christchurch (New Zealand) to the Australian port of Hobart. This step is a result of a law passed in 1986 by the parliament of New Zealand which prohibits calls at the country's ports of U.S. ships that have nuclear weapons on board.

PROGRAMS FOR ENSURING PEACE AND SECURITY IN THE ATR

Resolution of the problem of the survival of humanity in the nuclear missile age and the assurance of not only regional but universal peace depends to a great degree on the state of affairs in the Pacific Asiatic region with all of the diversity of its countries—large and small, socialist and capitalist, those that are nonaligned and those that participate in military blocs. The process of militarization in the region is not only not stopping, it is accelerating dangerously, transforming the ATR into an arena of instability and confrontation, into a breeding ground for armed conflicts.

However, along with all of the negative phenomena that have been considered above, it is impossible not to see that **forces are being activated in the ATR that are striving to set up a barrier on the road against nuclear weapons that are "creeping" into the region and that demand that people be assured a secure future.** The Soviet Union, an Asiatic and Pacific state, is actively contributing to this process.

The program proposed by M. S. Gorbachev in his speech in Vladivostok in July 1986, and which was developed further in his interview by the Indonesian newspaper MERDEKA on 21 July 1987, is a positive application of new thinking to the problems of the ATR. This program envisions: elimination of regional hotbeds of tension through political settlement; cessation of the nuclear arms race; reduction in armed forces and conventional weapons; establishment of nuclear-free zones; elimination of military bases on foreign territory; establishment of equal and mutually beneficial economic cooperation

between all countries of the region; strengthening measures for trust in the military sphere, and preparation for the convocation of an all-Asian conference in the future for joint quests for constructive resolutions.

The consistent course of the Soviet leadership on a step-by-step elimination of nuclear weapons in the world has contributed in many ways to the fact that the southern part of the Pacific Ocean has been declared a nuclear-free zone; the idea for the same kind of a zone in Southeast Asia is making headway, and demands are growing to free the Korean peninsula of nuclear weapons. The People's Republic of China is speaking out more actively on the problem of disarmament.

On the initiative of the Soviet Union, all RSD [intermediate range missiles] and OTR [close support missiles] in the Asiatic part of our country will be destroyed. In doing this, the USSR is not linking this step to the question of a U.S. nuclear presence in South Korea, the Philippines, and the island of Diego Garcia, with the hope that this presence will not grow there. Moreover, the Soviet Union has expressed a readiness not to increase the number of missile-carrying aircraft in the Asiatic part of the country, if the U.S. will refrain from deploying additional nuclear systems in Asia that can reach USSR territory.

Taking into account European experience that is applicable to the ATR, our country favors reducing military activity in the region, making air and naval lines of communication and international straits secure, starting talks on reducing the activity of military fleets in the Pacific Ocean, limiting antisubmarine rivalry, and limiting the scale of naval exercises and maneuvers in the Pacific and Indian oceans and adjacent seas. The Soviet Union attaches great significance to a ban on nuclear tests in the region, to a reduction of armed forces and conventional weapons in Asia to the limits of reasonable sufficiency, and to a step-by-step reduction of military confrontation embodied in a bloc policy to a minimum.

The Soviet Union proposes coming to an agreement on a step-by-step reduction in the armed forces of South Korea and the KNDR to 100,000 persons on each side, with the subsequent withdrawal of all American troops from the Korean peninsula. It supports normalization of Sino-Vietnamese relations and national reconciliation in Afghanistan, cessation of the fratracidal Iran-Iraq war, and the withdrawal of all military ships from the Persian Gulf that do not belong to the countries of that subregion.

The way to security in the ATR, naturally, will not be easy and short. The main obstacle is that the ruling circles of the U.S. and Japan still find themselves in the grip of militaristic thinking. The present political-military and economic situation in the region suits them. For it is easier to dictate their will, right down to armed conflicts, in an atmosphere of hostility between individual countries or groups of countries, and to justify the massed U.S. military presence in Asia and the Pacific Ocean area.

Looking to Washington and checking their actions with the instructions of the transoceanic partner, Japanese ruling circles express a sceptical attitude toward the Soviet peaceful initiative, and they come out against the attempts of countries of the region to create a nuclear-free zone and to lower the level of military confrontation. And this is a country that has itself experienced the horror of nuclear weapons and in words fights for their destruction!

Now, as never before, it is important to mobilize the potential for common sense that exists in the world, and it exists in the ATR. The positive trends in the region, with all the diversity and contradictions in the picture, are indicated, for example, by such signs as the increased yearning to get rid of nuclear weapons, which found expression in the Rarotonga Treaty that declared the southern part of the Pacific Ocean a nuclear-free zone, and by the critical speeches in Australia and New Zealand against French nuclear tests in the Pacific Ocean. A search is under way in Asia for a mechanism which could help ease tensions. It is no accident that it was here that the "fifth principle of peaceful coexistence" ("pancha shila") and the "10 principles of Bandung" were born. In essence, the ideological and political fundamentals of the nonalignment movement were laid in Asia.

The process of a critical rethinking of the idea of military partnership with the U.S. , which is difficult for ASEAN countries, is gaining strength. Membership in the SEATO bloc, which fell apart, ground up by mutual contradictions, was an instructive experience for some countries of the association. It seems that it convinced, if not all, then many in ASEAN that to permit the Pentagon on its own territory is like, as the well-known saying goes, "allowing a tiger to come into the house." There should be no doubt that the ASEAN states can do a lot to maintain a climate of peace and good neighborliness in Asia. Under these conditions, they can always rely on the understanding of the Soviet Union—a neighbor on the continent. The peculiarities of world outlook and the political and cultural distinctiveness of the countries of the ATR can prompt measures issuing from them, understandable and acceptable to all and that are not ordinary, for the resolution of cardinal problems of the largest region of the planet. The idea of conducting an all-Asiatic conference for a common search for constructive solutions proposed by M. S. Gorbachev represents a working hypothesis.

It will be necessary to overcome old thinking, prejudices and suspicions to ensure firm peace and security in the Pacific Asiatic region, for there is no other way.

13052

Discussion of Tactical Laser Weapon

18010415 Moscow TEKHNIKA I VOORUZHENIYE in Russian, No 6, Jun 88, pp 8-9, back cover

[Article by Maj V. Belov and Maj V. Savinov: "Laser Weapons"]

[Text] These weapons are related to the new class of so-called directed energy weapons, which make use of the special attributes of a laser beam—high energy density and low divergence.

The development of these weapons, the foreign press notes, is accompanied by basic theoretical research in the field of propagation of powerful laser radiation in the atmosphere, and its effects on various materials and objects, including biological, and is associated with a search for methods and creation of systems that provide precise beam guidance and maintain it on target.

Particular attention is being paid to the development of powerful laser emitters, the most promising of which are considered to be those based on gas dynamic, electrical charge, chemical and solid state lasers.

Foreign specialists believe that laser weapons can be used to destroy structural elements of weapons and military equipment, or to worsen the physical and mechanical characteristics of the metals from which they are made, enough to knock the weapon out of commission. This also relates to the photo detectors of electro-optic systems, television tubes of control and reconnaissance systems, and electro-optic convertors of night vision devices. In addition, through the use of lasers it is possible to create interference, which impedes the functioning of systems and devices and destroys personnel (Figure III).

According to foreign press data, the specific energy required to destroy metals and alloys is 14-62 kJ/cm^3, and that required to evaporate them is 13-23 kJ/cm. The threshold densities for destruction of thin semiconductor films lie in the range of 7-9 joules/cm^2 for millisecond pulses, and 0.2-2.5 joules/cm^2 for micro- and nanosecond impulses. The thresholds of voluminous damage to transparent dielectrics are 3-14 kJ/cm^2 for millisecond impulses.

According to assessments of foreign military specialists, laser radiations represent the greatest danger to the organs of sight, since sensitivity of the eyes to light effects is extremely high. Thus, the permissible level of eye exposure to the effects of impulse lasers, emitting in the range of 0.4-1.4 micrometers, is 10^{-7} - 10^{-6} joules/cm^2.

Beams of powerful gas dynamic CO_2 lasers, foreign specialists note, are especially dangerous to human skin, which has a high coefficient of absorption at a wave length of 10.6 micrometers. Even a brief impact of radiation at energy densities of 4-6 joules/cm^2 can lead to burns.

According to the foreign press, extensive research efforts are being carried out aimed at developing powerful lasers for ground-to-air, ground-to-ground, air-to-ground, air-to-air, space-to-space and ship-to-air weapons. It is reported that a number of experimental demonstration laser platforms have already been created and are being tested. Thus, a 400 kilowatt gas dynamic laser, and a special telescope, which were employed to destroy a tele-guided winged target, have undergone ground tests; a 30 kilowatt electric charge CO_2 laser, mounted on an armored personnel carrier base, destroyed a tele-guided fixed-wing aircaft and helicopter; a TOW ATGM [anti-tank guided missile] was intercepted and destroyed in flight through the use of a 400 kilowatt deuterium fluoride chemical laser, with guidance and tracking system; and a 400 kilowatt gas dynamic CO_2 laser on an aircraft was tested in a series of missile intercept experiments.

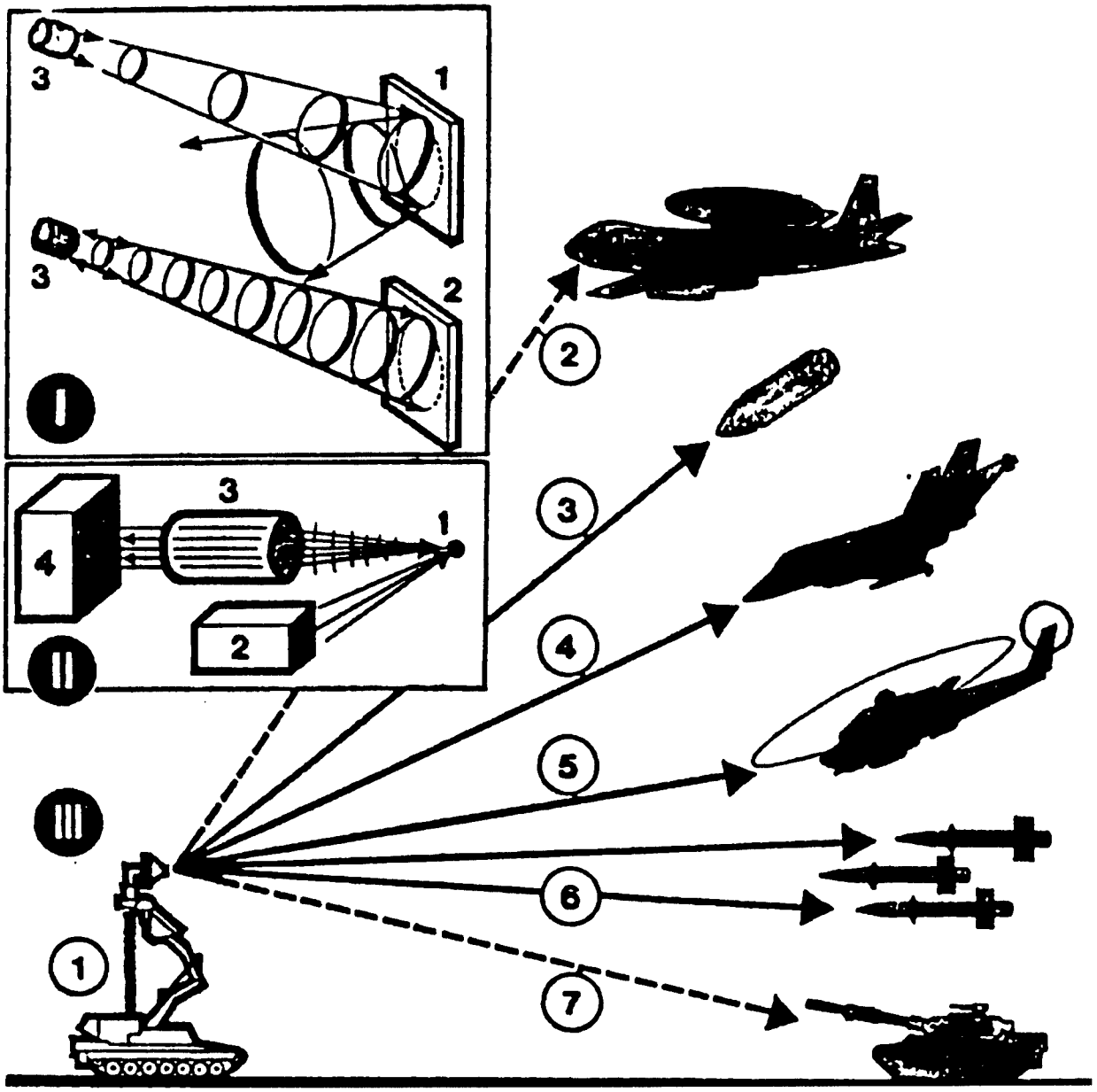
The foreign press also reports on the development of projects that anticipate the use of lasers of a new type, in particular eximer and X-ray lasers, which expand the spectral range of mechanical oscillators.

In the eximer laser, which generates impulses of ultraviolet radiation, a pulsating electron beam excites a mixture of gases (for example, xenon and chlorine) to a metastable molecular state, which spontaneously shifts to basic molecular state: short-lived inverse molecules break down into two atoms, emitting radiation with a wave length of approximately 0.3 micrometers.

The X-ray laser consists of a cylindrical system of thin metal threads, surrounding a nuclear explosive device. Thermal X-ray radiation resulting from a nuclear explosion (pumping by the nuclear explosion) causes the emission of particles from the threads in the course of several microseconds. It is believed that such an impulse of mild X-ray radiation will be absorbed by the surface layer of a target approximately 1 micrometer thick, "exploding" this very thin layer. In the opinion of foreign experts, if applied to a flying apparatus, for example, such an "explosion" can cause a deviation from the flight trajectory, and the fuselage (membrane) will be subjected to the abrupt effect of a compression wave, as a result of which damage to support structures and apparatuses is possible.

Foreign military specialists note that the studies conducted have shown the capability in principle to create laser weapons for all armed services. However, in order for laser weapons to become as effective as traditional types of weapons intended for similar tasks, it is necessary to solve a number of serious technical problems,

Laser Weapons

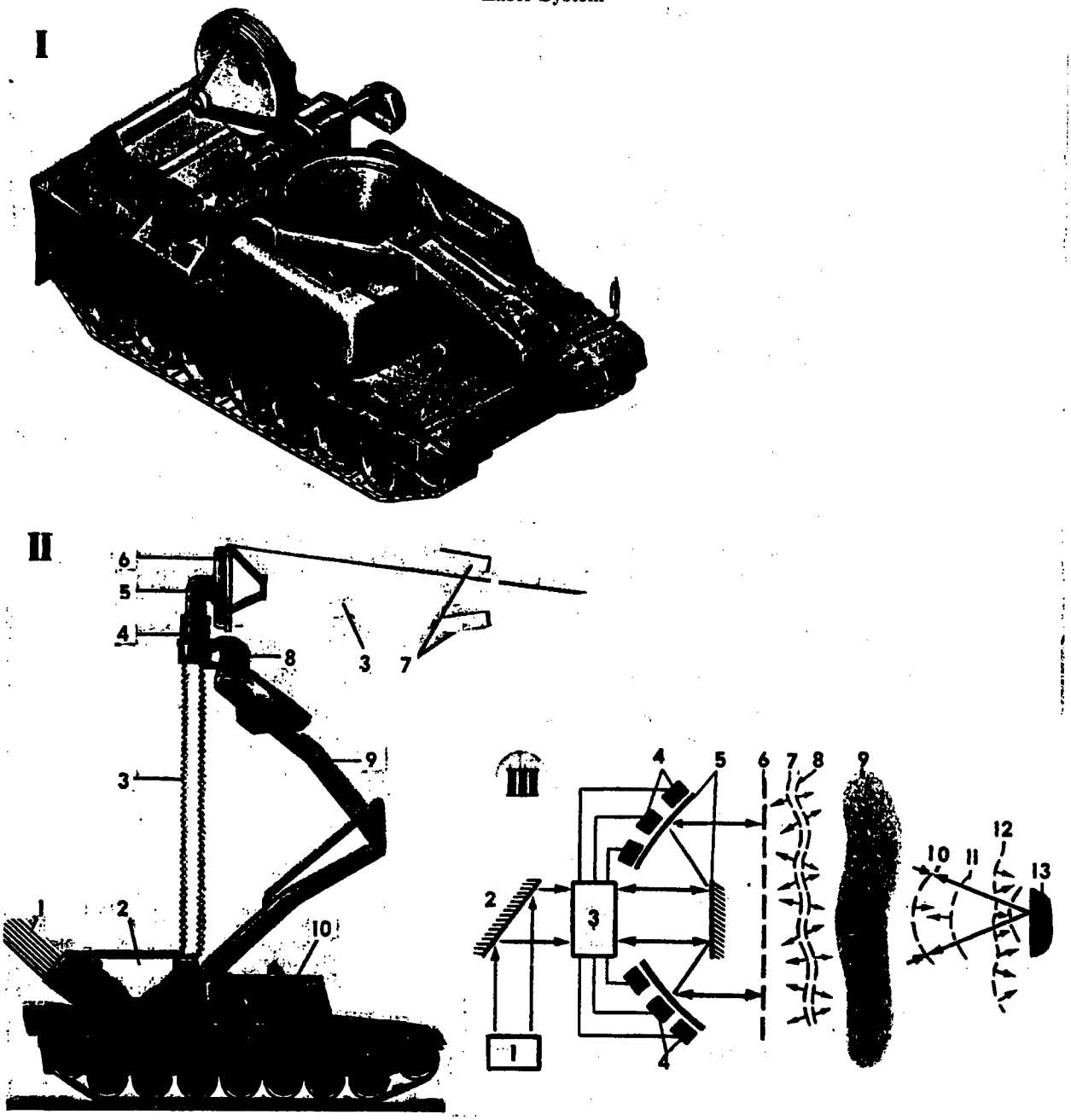


Key:I. Diagram comparing attributes of inverting and ordinary mirror: 1—ordinary mirror; 2—inverting "mirror;" 3—laser. The ordinary mirror simply reflects the laser beam; the inverting mirror forms a converging beam, regardless of the angle at which the initial beam strikes.

II. Diagram of self-guidance: 1—target; 2—illumination laser; 3—laser radiation amplifier; 4—wave front inversion device (inverting "mirror").

III. Possible variant uses of laser weapons: 1—laser weapon system; 2—suppression of on-board apparatus of reconnaissance aircraft; 3—destruction of ballistic missile reentry vehicle; 4—destruction of fighter-bomber; 5—destruction of helicopter; 6—intercept and destruction of guided and unguided missiles; 7—suppression of tank fire control system.

Laser System



Key: I. Outward appearance of high energy laser system of air defense troops in travel position.

II. Laser system on tank chassis: 1—heat exchanger; 2—laser apparatus; 3—laser beam; 4—base platform; 5—laser beam guidance and focusing system; 6—emittor; 7—radiation reflected from target; 8—target detection system; 9—folding lift arm; 10—fuel tank.

III. Diagram explaining the principles of forming a laser beam: 1—source of laser radiation; 2—mirror; 3—tracking system; 4—optical controlled elements; 5—forming system; 6—flat wave front at output of forming system; 7—wave front having derived distortion; 8—wave front at output of forming system after correction; 9—disturbing medium (atmosphere); 10—wave front after second pass through medium; 11—wave front, reflected from target sector; 12—front of distorted wave; 13—reflecting sector of target.

associated especially with shaking, shimmering and blurring of optical beams due to atmospheric turbulence, thermal aberrations and other factors that lead to distortion of the phase structure of the optic beam.Foreign specialists see one of the promising ways of solving these problems in the use of the phenomenon of wave front inversion. In foreign literature, systems using this phenomenon also often call it adaptive. In all adaptive optic systems, the radiating wave front is controlled in real time, for the purpose of optimizing the parameters of optic beams when they are affected by external disturbances.

Any adaptive optic system is composed of a transmitting system, including a source of radiation, system of coding information being transmitted, and optical control elements; and a receiving system, consisting of an electro-optic device and tracking system, and a generating signal, which is sent to the optical element being controlled. Sometimes an adaptive system (such as a closed tracking system) includes a medium of propagation of the optic beam on the path from the transmitter to the receiver, as well as a supporting emitter or object, toward which the optic beam is sent.

A wave front is a surface that links points that have the same phase of electromagnetic wave oscillations. For example, the wave front of a plane wave is a plane, that of a spherical wave is a concentric sphere, and the wave front of real laser beams has a complex form. Wave front inversion means that the initial and inverted waves have a precisely coinciding wave front, and are propagated precisely to meet one another. The initial beam is restored during the return pass of the inverted beam through the medium of its distortion (for example, a turbulent atmosphere).

It is relatively easy to create a planar inverted wave. It is sufficient to set up a flat mirror so that the wave is reflected back precisely. Beams with random wave fronts cannot be inverted using a flat mirror. For this a special mirror is required, the profile of which coincides with that of the beam wave front.

If a light beam is directed at a mirror (Figure I), an ordinary mirror (1) reflects it, and an inverting mirror (2), regardless of the angle at which the initial beam strikes, forms a convergent inverted beam.

The use of such inverting "mirrors," in the opinion of foreign specialists, will make it possible to accomplish self-guidance of laser radiation (Figure II). When target (1) is illuminated by low power laser (2), part of the light scattered by it is collected by the inverting laser system, strengthened with the use of amplifier (3), and sent back to the target. For the insubstantial amount that the atmospheric interference and target position change in the time that the light passes there and back, inverting "mirror" (4) will not only compensate for the distortion of the initial beam due to atmospheric turbulence, but also make it possible to track the target, continuously holding the beam on it. If the radiating is sufficiently intense, in the opinion of foreign specialists, the target can be knocked out of commission. Such schemes for use in laser weapons systems were proposed and intensively studied in the early 1970s.

For example, within the framework of the creation of missile defense, foreign specialists anticipate the use of a system of ground eximer laser-amplifiers jointly with orbital optic devices.

Each ground eximer laser sends out an impulse of radiation to a mirror approximately five meters in diameter, located in geostationary orbit, which, in turn, reflects the beam to a similar "combat" mirror, located in low orbit. The "combat" mirror aims the radiation at a rising carrier rocket with the aid of an infrared tracking system, through the emission of its engine plume.

It is noted that despite the main advantage of such a system, which is that complex and heavy laser platforms are located on earth, and not in orbit, the effectiveness of its employment depends to a signficiant degree on the ability to compensate for continuous and chance changes in atmospheric density. It is believed that a method making it possible to compensate for such disruptions, and in principle to employ lasers to intercept carrier rockets, can be based on the use of adaptive optics.

For this purpose, it is proposed that a satellite in geostationary orbit be equipped with a small eximer laser, mounted in front of the main mirror, and fastened to a 900 meter bracket. The radiation from this laser is directed to an earth based laser-amplifier equipped with an inverting device. The inverted wave is reinforced, and during the return pass distortions associated with non-uniformities, both in the amplifier and the atmosphere, are automatically compensated for.

The foreign press also reports on the development of projects that provide for the creation of laser weapons to solve air defense and antitank tasks. In one of them creation of a high energy laser weapon mounted on a tank chassis is planned. According to the project, it is anticipated that a 100 kilowatt laser capable of destroying aircraft or missiles at a range of up to 10 km will be used in this weapon. (It is to replace antiaircraft guns.) The weapon (weighing on the order of 55 tons) will include a laser emitter, turbine engine, fuel tank, liquid cooling system, and passive observation and target acquisition system (see figure from back cover of journal).

An important element of this weapon is its adaptive optic guidance system, located on a raised platform. The shape of the mirror changes, due to the use of numerous piezoelectric drives, located on the back side of the mirror. During target tracking, the laser beam itself becomes an element of the sensor in a closed control loop. To achieve this, a different reflection from the target, or a differentiated sequence of monitoring signals, a function of the deviation of the center of the laser beam

from the target readings, is used. Adjustment for atmospheric interferences can, in the opinion of foreign specialists, double the operating range of this weapon compared to systems operating with non-adaptive optics.

The foreign press reports that in experimental study of the effect of a laboratory model of the weapon on a target, consisting of a 10 mm thick titanium sheet, the sheet was pierced through in less than a second.

Improvement of laser weapons, the foreign press reports, is moving toward bettering their effectiveness in the event of enemy use of defensive measures (for example, reflective coatings, light filters, smokes, aerosols); creating powerful impulses of energy sources; developing beam guidance and target tracking systems; achieving optimal beam divergence; and combining laser systems with conventional weapons.

Assessing the prospects for combat employment of laser weapons, foreign military experts note that they will not be able to replace traditional missile artillery weapons systems.

The majority of foreign laser specialists believe that the levels of radition energy achieved at present are not the maximum. Improving the effectiveness of laser weapons, through increasing the energy level of the radiation affecting the target, will make it possible to use new physical principles in its systems, and combining laser and conventional weapons systems will make it possible to expand the tactical tasks that they solve.

9069

Deserter-POW Returns Under Amnesty

18010272 Moscow KOMSOMOLSKAYA PRAVDA in Russian 26 Jul 88 p 4

[Article by Yu.Sorokin, special correspondent, village Yekaterinovka, Ulyanovsk Oblast: "I Am Back, Mother"; first paragraph is an italicized introduction]

[Text]*As has been reported, former Soviet serviceman Nikolay Golovin, who was a prisoner of war in Afghanistan for 4 years, returned home, to village Yekaterinovka, Ulyanovsk Oblast.*

His mother did not recognize him at first: "Is it you, Kolya?" she asked. "Yes, it is me, mother," replied the son with a foreign accent.

Before being drafted, Nikolay Golovin had finished 8 years of general school and graduated from a trade school, becoming an electrician. He did his practical training in Moscow, at the construction of the Olympic Village. For 7 months he worked at a small brick plant near his village. (At that plant, his mother, Aleksandra Ivanovna, worked all her life as a menial worker.)

On April 2, 1981, Nikolay, 18 years of age at the time, was drafted. First there was boot camp in Belorussia and then Afghanistan.

After a few months his mother received a letter of recognition from her son's unit, but 15 months later letters from her son stopped. The mother did not know that her son had committed a serious breech of discipline, was put in the military jail and on July 20, 1982, disappeared. He escaped. When men from her son's draft were discharged, the mother went to the military commissariat, to find out what happened to her son. "If he returns, or if you receive any information as to his present whereabouts," was the military commissariat's reply, "please report it immediately to the village soviet ispolkom, rayon military commissariat and rayon police department."

She waited for him all those years.

Nikolay is unwilling to talk about his capture. It is hard for him probably, and he is ashamed of those memories. For 2 years he and private Igor Kovalchuk were in Afghanistan. "They treated us like dogs, trading us between gangs for arms." Then, there were 2 years in Pakistan. One night he tried to escape. He walked to the border, toward Soviet troops. They caught him a day later, bringing him back to the Afghan camp. As a punishment he was lashed with a metal rod.

One of our newspapers has mentioned that Nikolay was taken to Canada against his will. "It is not true. We were glad to get out. Soviet representatives were not allowed there; foreign journalists and the International Red Cross were helping us. When we were told that there was a possibility to go to Canada, we stopped using drugs. It was very hard, but we succeeded."

Along with Nikolay, four other prisoners went from Pakistan to Canada. They were Sergey Busov from Perm, Igor Kovalchuk from Kharkov, Vadim Plotnikov from Moscow and Vladislav Naumov from Volgograd. Will they ever come back to the Motherland? "I think that three of them will, but maybe not Vladislav Naumov. He is about to get married."

In Canada, he lived for 1 year and 7 months. First in Toronto and then in Kitchener. He studied English at special courses, free of charge. He speaks English more or less fluently, although he reads it rather poorly and has not learned to write it at all. He rented a room for Can$80 per week. He changed several jobs, his last one being at a slaughter house. He was paid Can$292 per week after taxes. He bought a tape recorder and a television set and was going to buy a car on a lay-away plan. At a special store he sometimes got PRAVDA in Russian.

He thought of returning home constantly, but feared prison and dishonor.

Last year, he received a letter from home. His mother and sister Tatyana wrote that first frosts were already setting in Yekaterinovka, that the grandmother had died and that Tanya was married. He did not reply. "I could not," he says.

On July 18, he read in the newspaper that the USSR Procurator General declared that Soviet servicemen living abroad could return to the USSR. No criminal charges would be pressed against them.

He called the Soviet Consulate the same day. They told him that the next plane to Moscow left the next day from Montreal. It was too late for him to make that flight. Yet, he left the house and got into a taxi cab. He flew from Toronto to Montreal and took a cab from one Montreal airport to the other. He got there in time. In Moscow, after a press conference, accompanied by Red Cross representatives, he went to the railroad station. All tickets were sold out. The military commandant helped him and found a place for him on the train. He got a ride for the 20 kilometers from the Inza station to Yekaterinovka.

"Mother asked: 'Is it you, Kolya?' I cried for the first time in 7 years."

At the Inzenskiy rayon military commissariat, Major Yu.M.Seleznev told me that had Golovin not run away then, he would have returned much earlier. "This way it took him 7 years. By the way, all those years, we were harangued for poor military patriotic work with draftees, thanks to him."

I do not know and will not try to judge whether there is more guilt here or misfortune. For 3 days, tears of joy have been flowing in the home of Aleksandra Ivanovna Golovina, an ailing woman grown old from waiting. Would it have been better if those were tears of sorrow?

Not everyone comes home a hero from this war. But let them come home. By showing mercy to them, the heroes' glory does not diminish. Let us be merciful then!

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